MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: 99005C

PROJECT: INEEL/TRA

DATE: 5-26-99

INSPECTOR: DEAN BIRD

CLIENT: INEEL

CONTRACTOR: PHENIX

PERMIT:

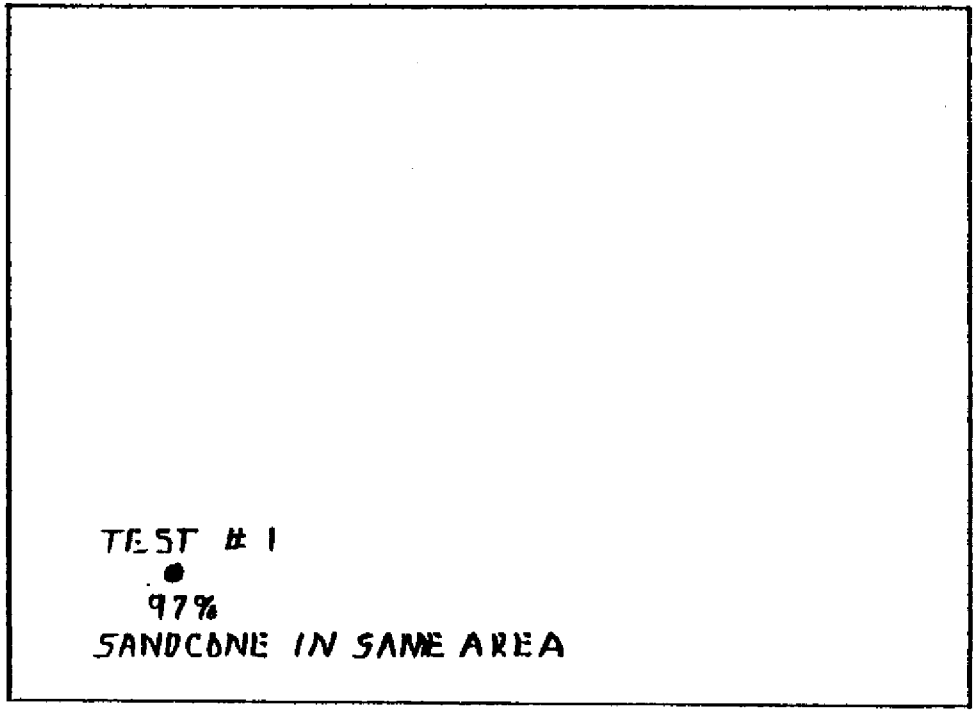
WEATHER: HOT 80°

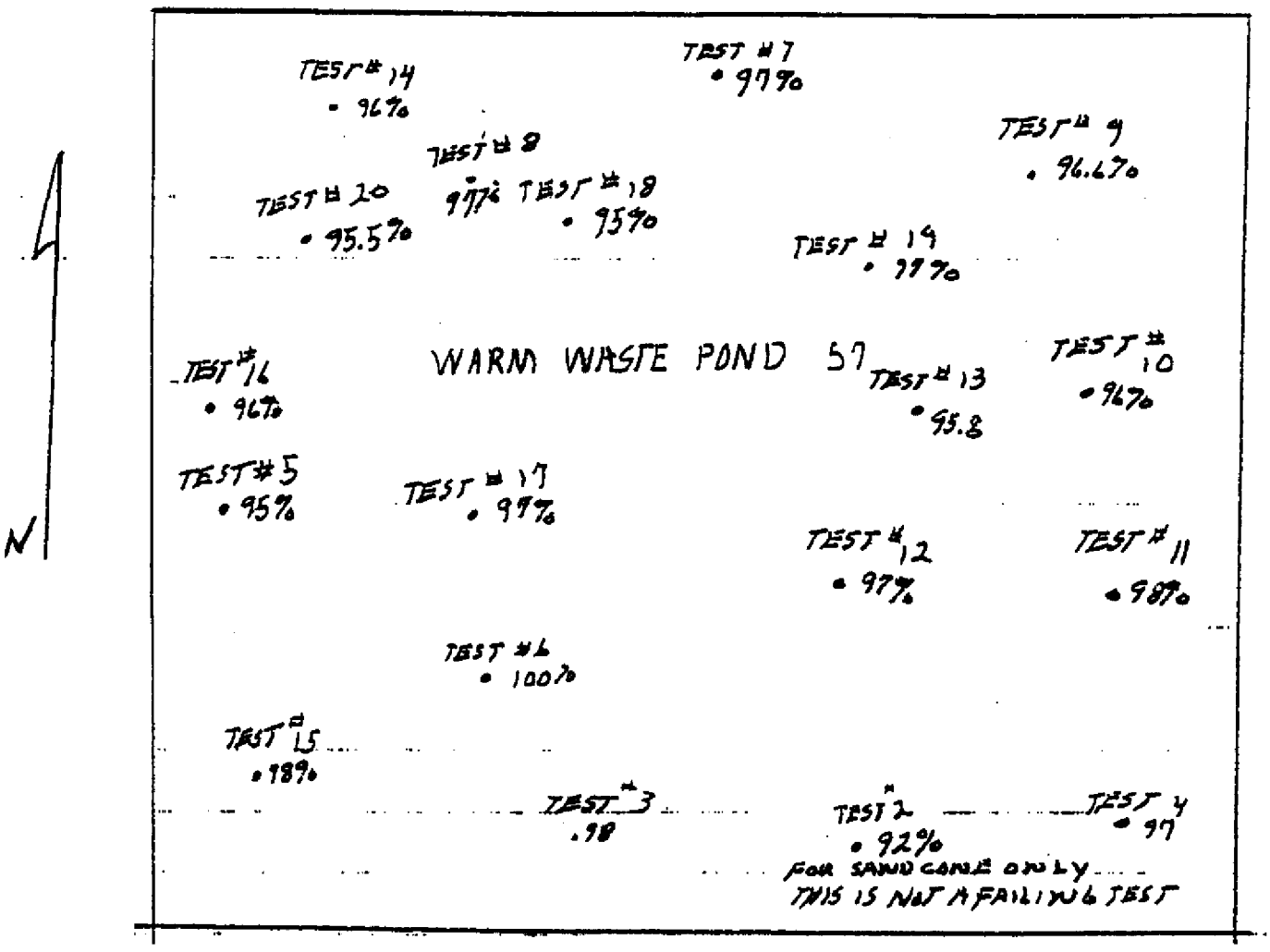
% Compaction Required: 95 Soils: 5362 Asphalt: — Nuke Gauge: #19

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
19	126.6	6.6	5.2	120.0	123.6	9.4	97
Location:	85' S. OF N. SIDE 65' W. OF E. SIDE 4" DEPTH -5' BELOW GRADE WARM WASTE POND						
20	128.3	10.2	7.9	118.1	123.6	9.2	95.5
Location:	50' E. OF W. SIDE 65' SOUTH OF N. END 4" DEPTH -5' BELOW GRADE WARM WASTE POND						
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							

230 South Cole R[illegible] Idaho 83709
Phone: (208) 376-[illegible] [illegible](208) 322-6515

MAY-26-99
CHEM LEECH POND




TEST #14
• 96%
TEST #7
• 97%
TEST #9
• 96.6%
TEST #8
97%
TEST #20
• 95.5%
TEST #18
• 95%
TEST #19
• 97%
WARM WASTE POND 57
TEST #16
• 96%
TEST #13
• 95.8
TEST #10
• 96%
TEST #5
• 95%
TEST #17
• 97%
TEST #12
• 97%
TEST #11
• 98%
TEST #6
• 100%
TEST #15
• 98%
TEST #3
• 98
TEST #2
• 92%
TEST #4
• 97
FOR SAND CONE ONLY
THIS IS NOT A FAILING TEST
N

MTI

Materials Testing & Inspection, Inc.

In-Place Nuclear Density Test Report

7-12-99

- [x] A WORK MAY PROCEED SUBJECT TO INCORPORATION OF COMMENTS
- [ ] B REVISE AND RESUBMIT WORK MAY PROCEED SUBJECT TO INCORPORATION OF CHANGES INDICATED
- [ ] C REVISE AND RESUBMIT WORK MAY NOT PROCEED
- [ ] D REVIEW NOT REQUIRED WORK MAY PROCEED

CONTRACT NO. 5-7304449.01-093
BY: Cimotti Vogle
DATE: 6-28-99

WARM WASTE POND

FILE#: E99005C
DATE: 5-27-99
CLIENT: INEEL
PERMIT: —

PROJECT: R.O INEEL ITRA
INSPECTOR: D. BIRD
CONTRACTOR: PHENIX
WEATHER: HOT 80°

% Compaction Required: 95% Soils: 5362 Asphalt: — Nuke Gauge: 417

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#1	131.25	11.0	8.3	120.25	123.6	9.4	97.2
Location:	35' W. OF E SIDE 30 S. OF N END 4" DEPTH 4' BELOW GRADE WARM WASTE						
SANDCONE							
#2	130.2	9.6	7.3	120.6	123.6	9.4	97.5
Location:	35' W OF E SIDE 75' S. OF N. END 9" DEPTH 4' BELOW GRADE						
#3	128.3	11.0	8.5	117.3	123.6	9.4	94.9
Location:	50' N OF S. END 35' WEST OF E. SIDE 4" DEPTH 4' BELOW GRADE						
#4	129.6	11.0	8.9	118.6	123.6	9.4	95.9
Location:	35' N. OF S. END 35' W. OF E SIDE 4" DEPTH 4' BELOW GRADE						
#5	128.2	10.0	7.8	118.2	123.6	9.4	95.6
Location:	50' N OF S. END 60' W. OF E SIDE 4" DEPTH 4' BELOW GRADE						
#6	133	12.2	9.7	120.8	123.6	9.4	97.7
Location:	30' S OF N END 60' W OF E SIDE 4" DEPTH 4' BELOW GRADE						
#7	132.1	11.6	8.7	120.5	123.6	9.4	97.4
Location:	60' E OF W. SIDE 20' S. OF N END 4" DEPTH 4' BELOW GRADE						
#8	129.8	10.2	7.8	119.6	123.6	9.4	96.4
Location:	65' W OF E SIDE 60' N OF S. END 4" DEPTH 4' BELOW GRADE						
#9	129.0	11.0	8.5	118.0	123.6	9.4	95.4
Location:	60' N OF S. SIDE 60' E. OF W. SIDE 4" DEPTH 4' BELOW GRADE						

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

WARM WASTE POND

FILE#: E99005 C | PROJECT: INEEL TRA

DATE: 5-27-99 | INSPECTOR: D. BIRD

CLIENT: INEEL | CONTRACTOR: PHOENIX

PERMIT: | WEATHER: 10's 80°

% Compaction Required: 93% | Soils: 536-2 | Asphalt: — | Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#10	128.1	11.1	8.5	117.0	123.9	9.4	94.6
Location:	35' N. OF S. SIDE 50' W. OF W. SIDE 4" DEPTH -4" BELOW GRADE. ALL TESTS WARM WASTE POND						
#11	127.2	9.0	7.0	118.2	123.9	9.4	95.6
Location:	50' W. OF E. SIDE 60 N. OF S. SIDE 4" DEPTH -4" BELOW GRADE						
#12	130.0	10.1	7.7	119.9	123.9	9.4	97.0
Location:	40' W. OF E SIDE 45' S. OF N. END 4" DEPTH -4" BELOW GRADE						
#13	136.9	11.0	8.1	119.9	123.9	9.4	97.0
Location:	35' E OF W. SIDE 35' S. OF N. SIDE 4" DEPTH -4" BELOW GRADE						
#14	129.8	11.2	8.6	118.6	123.9	9.4	95.9
Location:	35' E OF W. SIDE 47' S. OF N. SIDE 4" DEPTH -4" BELOW GRADE						
#15	127.6	9.3	6.6	118.7	123.9	9.4	96
Location:	35' E. OF W. SIDE 75' S. OF N. SIDE 4" DEPTH -4" BELOW GRADE						
#16	128.50	9.5	7.3	119.0	123.6	9.4	96
Location:	35' E. OF W. SIDE 35' S. OF N. SIDE 4" DEPTH -4" BELOW GRADE						
#17	133.2	11.3	9.2	120.9	123.6	9.4	97.8
Location:	35' E. OF W. SIDE 300 N. OF S. SIDE 4" DEPTH -4" BELOW GRADE						
#18	134.1	13.9	10.3	120.2	123.6	9.4	97
Location:	35' E. OF W. SIDE 35' N. OF S. SIDE 4" DEPTH -4" BELOW GRADE						

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

WARM WASTE POND

FILE#: E99005 c

PROJECT: INEEL ITRA

DATE: 5-27-99

INSPECTOR: D. BIRD

CLIENT: INEEL

CONTRACTOR: PHENIX

PERMIT:

WEATHER: HOT 85-0

% Compaction Required: 95-70 Soils: 5362 Asphalt: — Nuke Gauge: #17

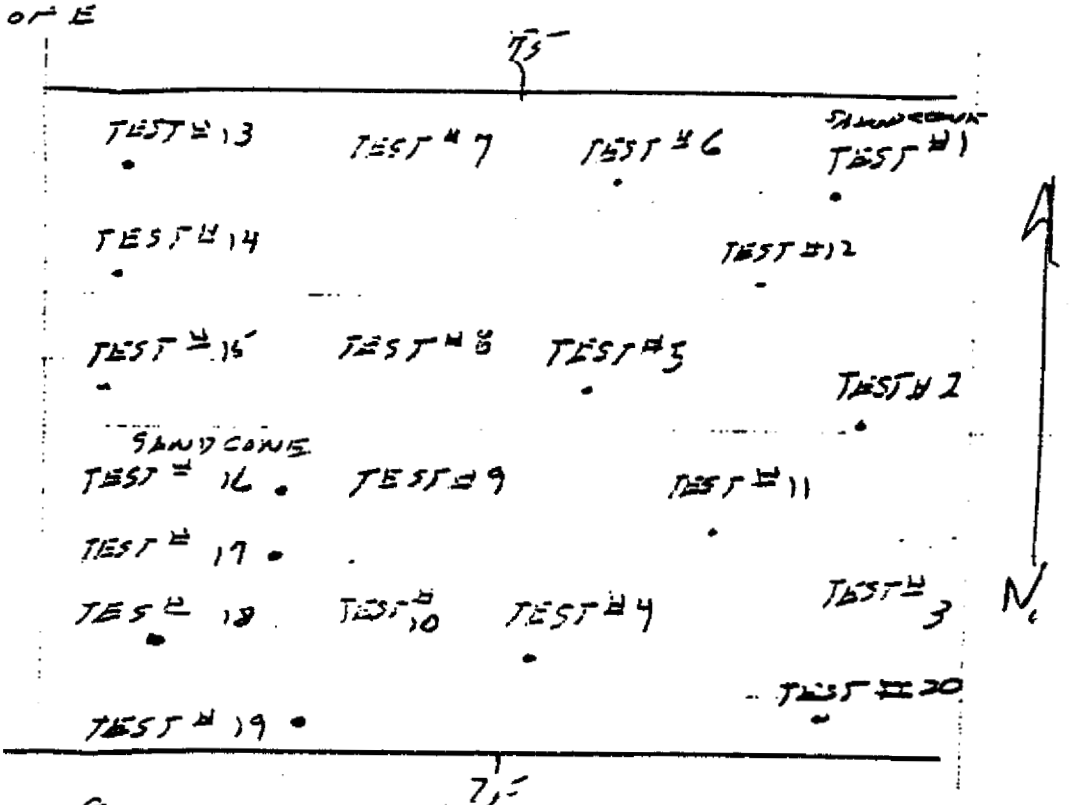
Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#19	129.9	11.3	8.6	118.6	123.6	9.4	95.9
Location:	20' N. OF S. SIDE 38' E. OF W. SIDE 4" DEPTH -4' BELOW GRADE						
#20	128.6	10.6	8.2	118.0	123.6	9.4	95.4
Location:	35' N. OF S. SIDE 38' E. OF E. SIDE 3' DEPTH -4' BELOW GRADE						
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							

25' W. of E 50' S. of N

35 W. of E. 75' S of N

50' N. of S 35' W. of E

50' N of S 75 W of E



96

1	97.2	6	97.7	11	95.7	16	96
2	97.5	7	97.4	12	97.0	17	97.8
3	94.9	8	96.7	13	97.0	18	97.0
4	95.9	9	95.9	14	96.9	19	95.9
5	95.6	10	94.6	15	96.0	20	95.4

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

July 1, 1999

SUBMITTAL NO.: S-7304449.01- 093 Rev. 1	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST REPORTS TYPE A SOIL 1957 CELL 6/1/99
"B" TEST REPORTS TYPE A SOIL 1957 CELL 6/2/99
"C" TEST REPORTS TYPE A SOIL 1957 CELL 6/3/99
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER -	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JULY 9, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A			
B			
C			

REVIEWER: DATE:

APPROVAL AUTHORITY DISPOSITION

SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COM S AND DISPOSITION PROVIDED.

DISPOSITION: ☒ A ☐ B ☐ C ☐ D COMMENTS: YES ☒ NO ☐ ATTACHED: ☒

RESPONSIBLE ENGINEER: C. J. Reese DATE: 7/12/99

94

SEE INSTRUCTION REVERSE SIDE

VENDOR DATA TRANSMITTAL AND DISPOSITION

PARSONS ENGINEERING SCIENCE, INC.
Mail Stop MS 3954
ATTN: Document Control
200 S. WOODRUFF AVE. (P.O. BOX 1625)
Idaho Falls, Idaho 83415 3954

(1) Submittal No. 5-7304449.01-094 (2) Rev 0
(3) Project TRA REMEDIAL ACTION OU 2-13 (4) No. 7304449.01
(5) Subcontractor PHENIX OF IDAHO, INC.
(6) Subcontractor Code 99-02-94
(7) Date of Submittal 06-04-99

ORIGINAL

( ) ... may proceed subject to incorporation of any comments noted.
( ) Revise and resubmit. Work may proceed subject to incorporation of comments noted.
( ) Revise and resubmit. Work may not proceed.
( ) Review not required. Work may proceed.

(8) Line Item No.	Rev	(9) Spec Ref	(10) VDS Item No	(11) Qty Encl	(12) Resub	(13) Mand Apvl	(14) Or Eq Apvl	(15) Info	(16) Submittal Data Description	(17) Document No	Rev	(18) Disp Status
A	0	02200 (3.5.1)	4-02	4		X			TEST RESULTS GRADATION TYPE A SOIL			A

(19) Remarks:

(20) Subcontractor Signature [signature] Date 06-04-99

(21) Date Received	Date Forwarded	Qty Encl	Signature
6-7-99	6-7-99	4	AP
6-23-99	6-23-99	1	AP

(22) Comments:

(23) [ ] Additional Comments Attached [signature] 6/23/99
(24) Signature Date

(25) Distribution	CVR	Sets	Distribution	CVR	Sets
ESMI			CAM Craig		
QC Leo			PRO		
DC			SUB Pat Taylor		
CC Jody					

(26) I acknowledge receipt of the data indicated and agree ___ disagree ___ to incorporate any comments.

[signature] Subcontractor Signature 6-23-99 Date

B-335

MATERIALS TESTING & INSPECTION

nvironmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspectio

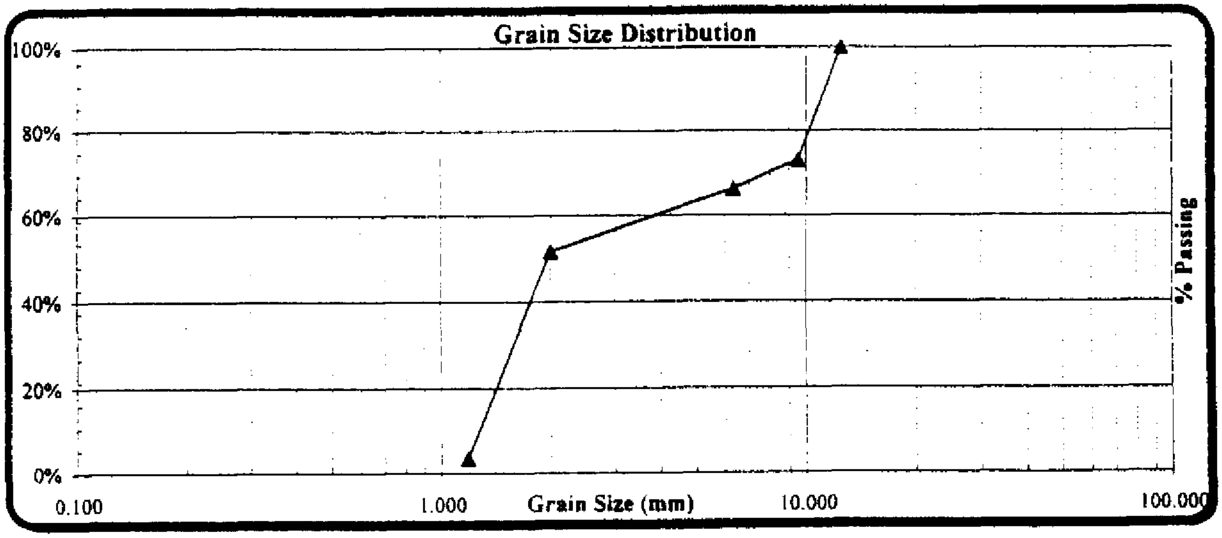
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Source: Type A
Sample ID: 5396
Date Received: May 17, 1999

% Moisture: 10.2
Classification: ML-CL
Liquid Limit: 20
Plastic Limit: 14
Plastic Index: 5.43

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
12.5	1/2"	100%	
9.5	3/8"	100%	
4.75	#4	81%	
2.36	#8	77%	
2.00	#10	77%	
1.180	#16	75%	
0.600	#30	75%	
0.425	#40	73%	
0.300	#50	66%	
0.150	#100	52%	
0.075	#200	3.6%	



☒ A WORK MAY PROCEED SUBJECT TO INCORPORATION OF COMMENTS
☐ B REVISE AND RESUBMIT WORK MAY PROCEED SUBJECT TO INCORPORATION OF CHANGES INDICATED
☐ C REVISE AND RESUBMIT WORK MAY NOT PROCEED
☐ D REVIEW NOT REQUIRED WORK MAY PROCEED

CONTRACT NO. S-730441 9.01-094
BY: Annette Pascoe
DATE: 6-23-99

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: Lowell Trujillo
Eastern Idaho Regional Manager
LT/klp

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402 208 529-8242 Fax 208 529-6911
E-Mail eimti@srv.net www.cyberhighway.net/~mti

MATERIALS TESTING & INSPECTION

..nvironmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspections

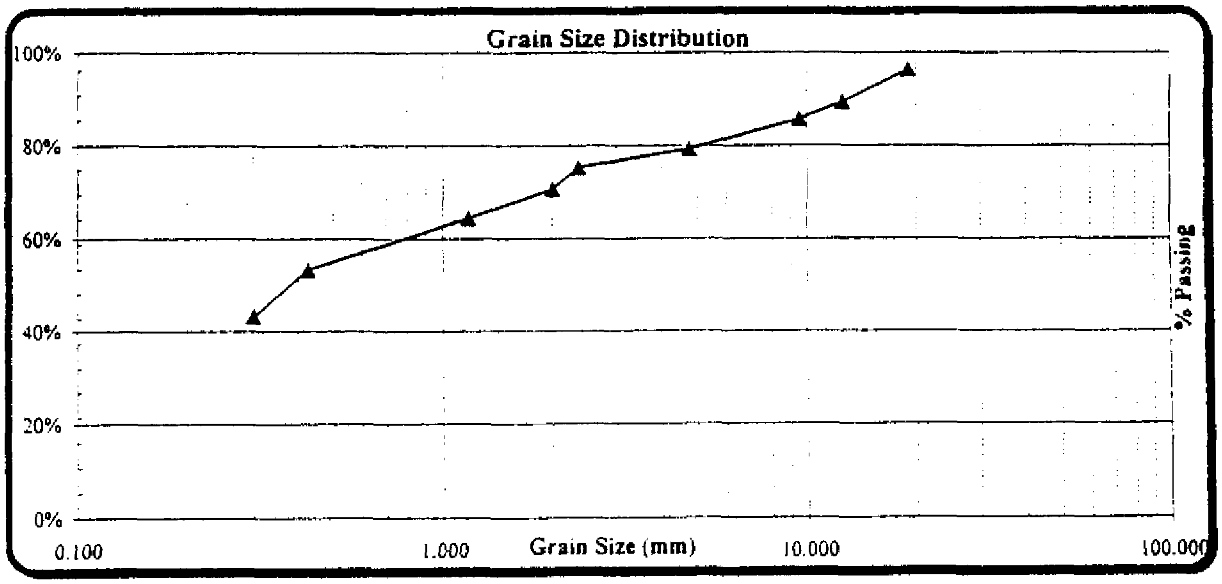
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Source: Type A
Sample ID: 5409
Date Received: May 19, 1999

Percent Moisture: 7.6%
Liquid Limit: 18
Plastic Limit: 16
Plasticity Index: 3
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
37.5	1 1/2"	100%	
25	1"	100%	
19	3/4"	96%	
12.5	1/2"	89%	
9.5	3/8"	86%	
4.75	#4	79%	
2.36	#8	75%	
2.00	#10	75%	
1.180	#16	73%	
0.600	#30	71%	
0.425	#40	69%	
0.300	#50	64%	
0.150	#100	53%	
0.075	#200	43.2%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

...viewed by: **Lowell Trujillo**
..tern Idaho Regional Manager
LT/klp

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402 208 529-8242 Fax 208 529-6911
E-Mail eimtl@srv.net www.cyberhighway.net/~mti

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspec

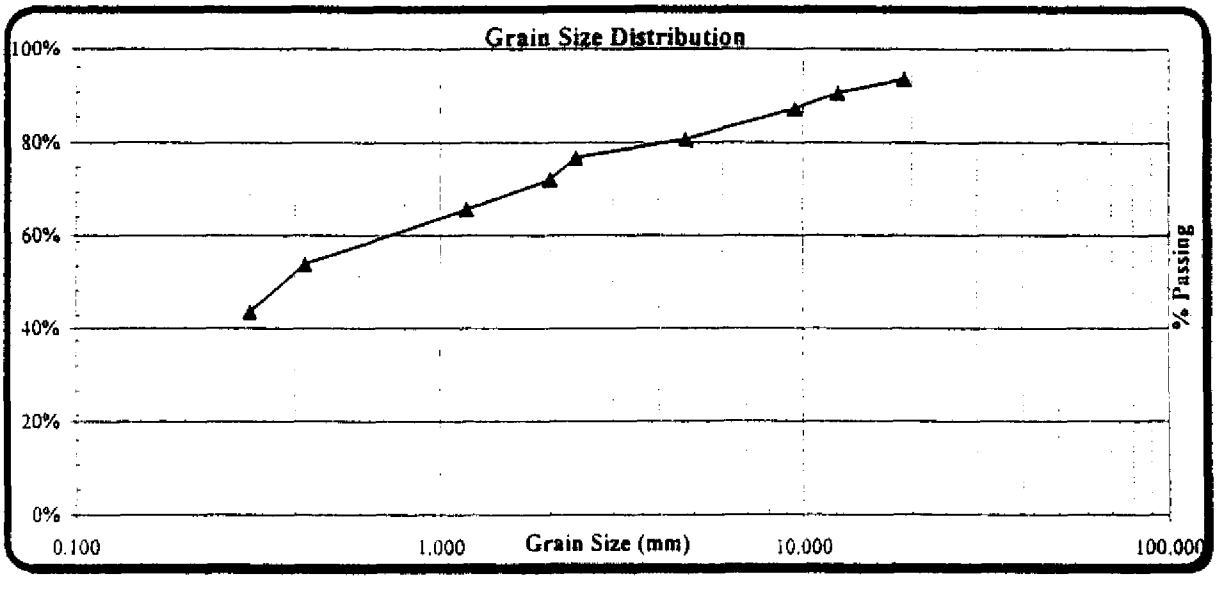
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Source: Type A
Sample ID: 5410
Date Received: May 19, 1999

Percent Moisture: 7.5%
Liquid Limit: 18
Plastic Limit: 15
Plasticity Index: 3
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
37.5	1 1/2"	100%	
25	1"	97%	
19	3/4"	94%	
12.5	1/2"	91%	
9.5	3/8"	87%	
4.75	#4	81%	
2.36	#8	77%	
2.00	#10	76%	
1.180	#16	75%	
0.600	#30	72%	
0.425	#40	70%	
0.300	#50	66%	
0.150	#100	54%	
0.075	#200	43.5%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
stern Idaho Regional Manager
klp

MATERIALS TESTING & INSPECTION

Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspections

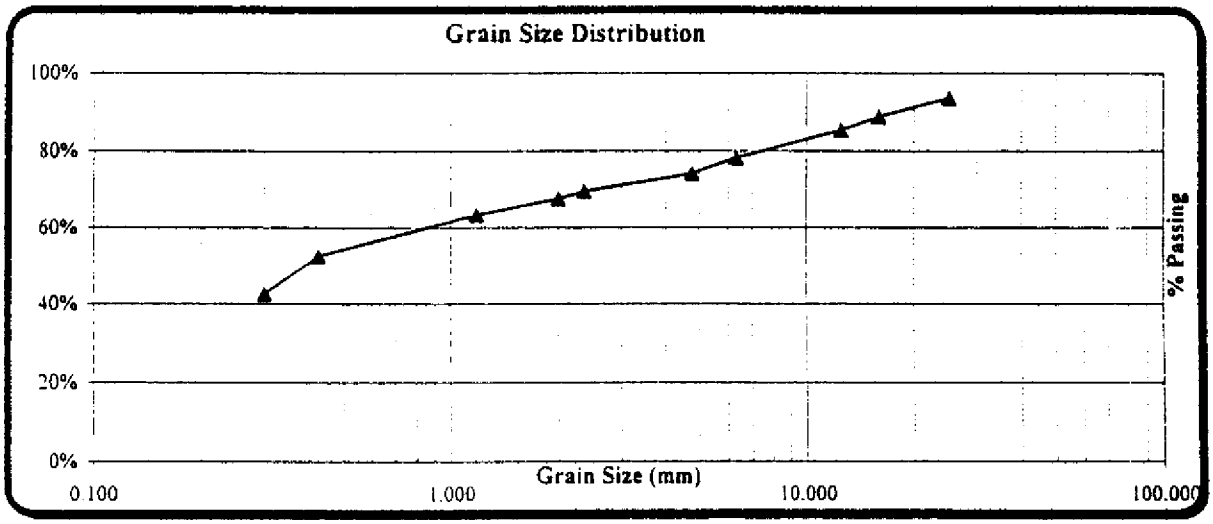
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Date Received: May 19, 1999
Sample ID: 5411
Sample Location: Type A

Percent Moisture: 7.6%
Liquid Limit: 18
Plastic Limit: 15
Plasticity Index: 3
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
75	3"		
50	2"	100%	
37.5	1 1/2"	99%	
25	1"	97%	
19	3/4"	94%	
12.5	1/2"	89%	
9.5	3/8"	85%	
4.75	#4	78%	
2.36	#8	74%	
2.00	#10	74%	
1.180	#16	72%	
0.600	#30	70%	
0.425	#40	68%	
0.300	#50	63%	
0.150	#100	53%	
0.075	#200	42.6%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager

MATERIALS TESTING & INSPECTION

REVISION DATE JUNE 2, 1999

C:\99 JOBS\E99005C\SOILS\5412.DOC

nvironmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspectio.

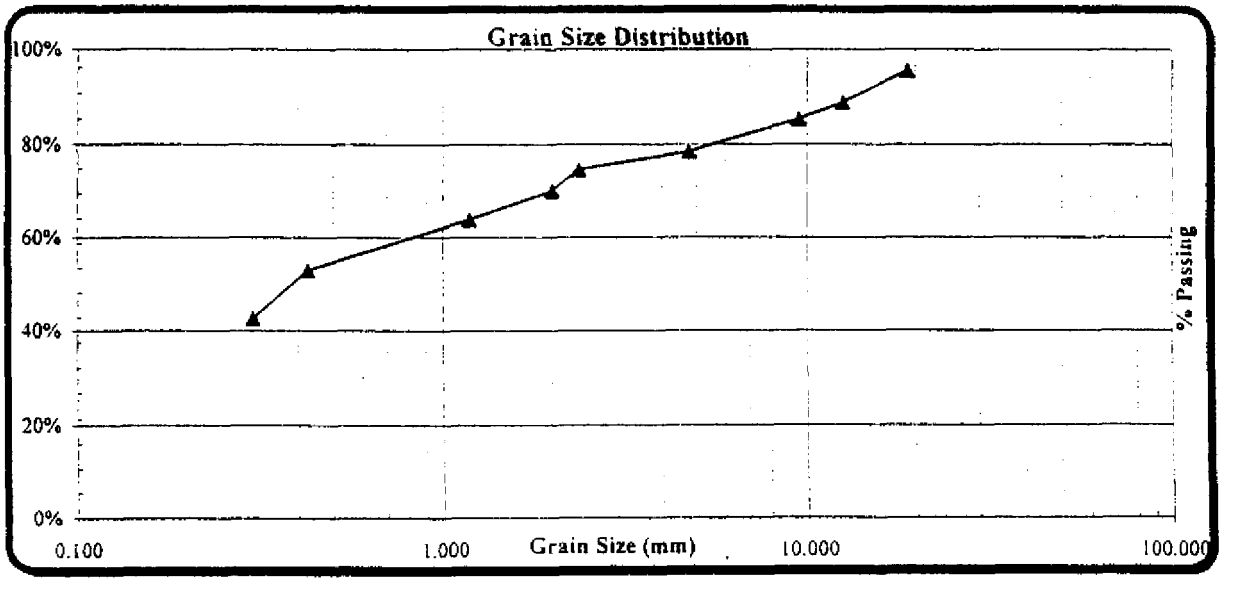
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Source: Type A
Sample ID: 5412
Date Received: May 19, 1999

Percent Moisture: 6.9%
Liquid Limit: 17
Plastic Limit: 16
Plasticity Index: 1
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
37.5	1 1/2"	100%	
25	1"	99%	
19	3/4"	96%	
12.5	1/2"	89%	
9.5	3/8"	85%	
4.75	#4	79%	
2.36	#8	75%	
2.00	#10	74%	
1.180	#16	73%	
0.600	#30	70%	
0.425	#40	68%	
0.300	#50	64%	
0.150	#100	53%	
0.075	#200	42.6%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
ern Idaho Regional Manager

ldp

MATERIALS TESTING & INSPECTION

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspections

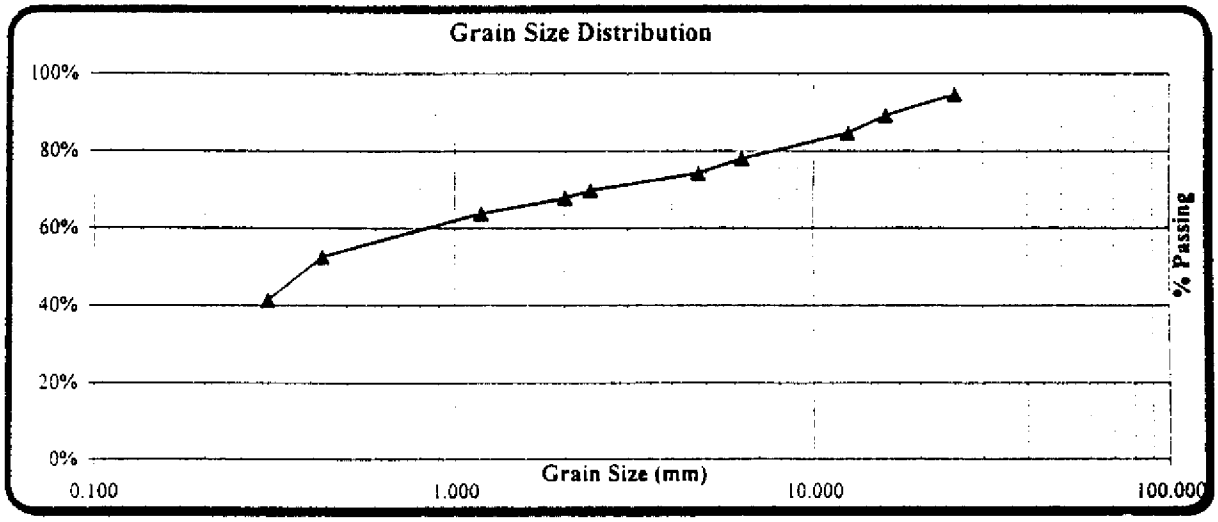
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Date Received: May 19, 1999
Sample ID: 5413
Sample Location: Type A

Percent Moisture: 7.9%
Liquid Limit: 18
Plastic Limit: 14
Plasticity Index: 4
Classification: SM-SC

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
75	3"		
50	2"	100%	
37.5	1 1/2"	99%	
25	1"	98%	
19	3/4"	95%	
12.5	1/2"	89%	
9.5	3/8"	85%	
4.75	#4	78%	
2.36	#8	74%	
2.00	#10	74%	
1.180	#16	72%	
0.600	#30	70%	
0.425	#40	68%	
0.300	#50	64%	
0.150	#100	53%	
0.075	#200	41.3%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager

MATERIALS TESTING & INSPECTION

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspectio

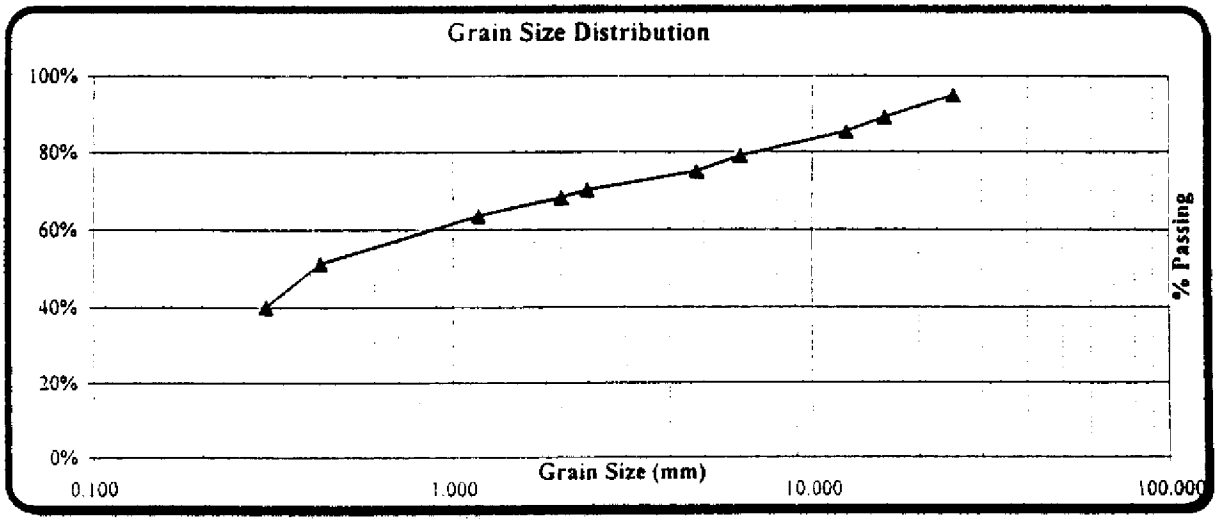
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Date Received: May 19, 1999
Sample ID: 5414
Sample Location: Type A

Percent Moisture: 7.9%
Liquid Limit: 18
Plastic Limit: 15
Plasticity Index: 2
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
75	3"		
50	2"	100%	
37.5	1 1/2"	100%	
25	1"	98%	
19	3/4"	95%	
12.5	1/2"	89%	
9.5	3/8"	85%	
4.75	#4	79%	
2.36	#8	75%	
2.00	#10	74%	
1.180	#16	73%	
0.600	#30	70%	
0.425	#40	68%	
0.300	#50	64%	
0.150	#100	51%	
0.075	#200	40.1%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager
klp

MATERIALS TESTING & INSPECTION

hvironmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspections

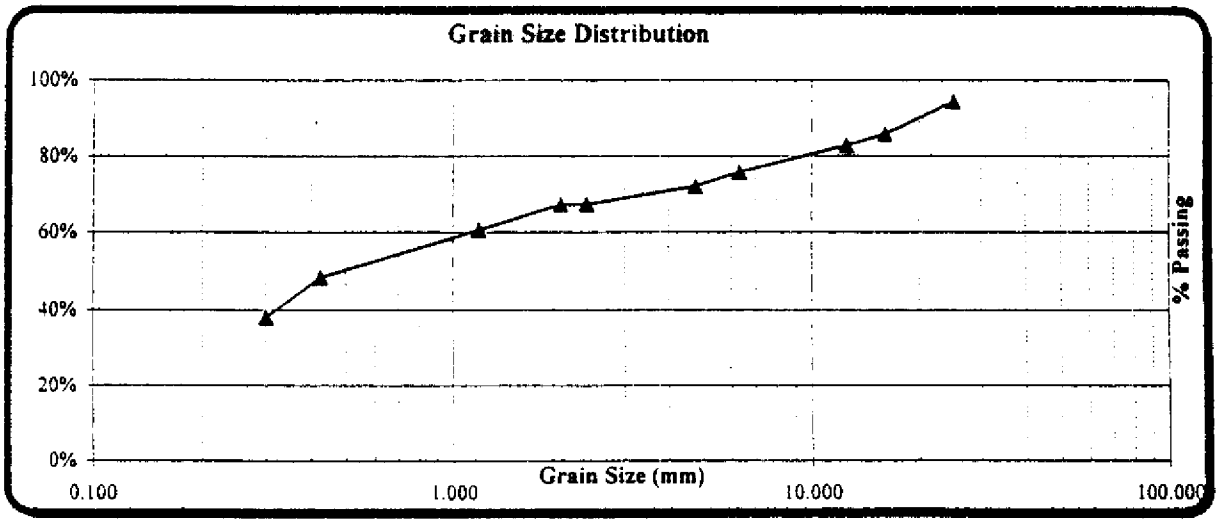
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Date Received: May 19, 1999
Sample ID: 5415
Sample Location: Type A

Percent Moisture: 7.7%
Liquid Limit: 17
Plastic Limit: 16
Plasticity Index: 1
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
75	3"		
50	2"	100%	
37.5	1 1/2"	98%	
25	1"	96%	
19	3/4"	94%	
12.5	1/2"	86%	
9.5	3/8"	83%	
4.75	#4	76%	
2.36	#8	72%	
2.00	#10	71%	
1.180	#16	70%	
0.600	#30	67%	
0.425	#40	67%	
0.300	#50	61%	
0.150	#100	49%	
0.075	#200	38.1%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager

MATERIALS TESTING & INSPECTION

REVISION DATE JUNE 2, 1999

C:\99 JOBS\699005C\SOILS\5418.DOC

Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspection

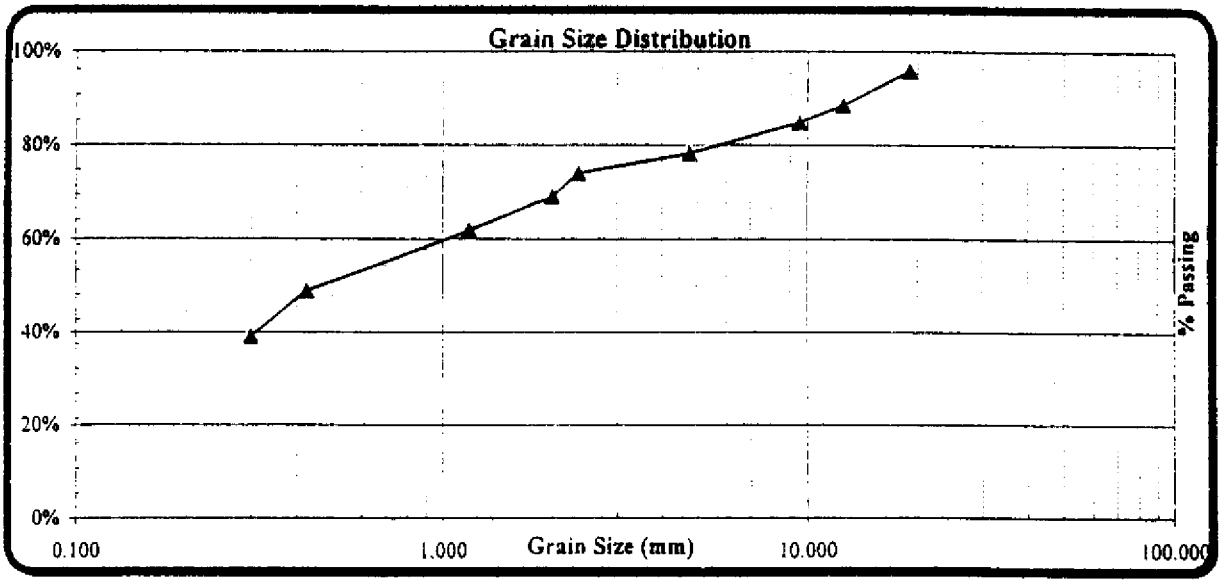
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Source: Type A
Sample ID: 5418
Date Received: May 20, 1999

Percent Moisture: 6.5%
Liquid Limit: 15
Plastic Limit: 16
Plasticity Index:
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
37.5	1 1/2"	100%	
25	1"	99%	
19	3/4"	96%	
12.5	1/2"	89%	
9.5	3/8"	85%	
4.75	#4	78%	
2.36	#8	74%	
2.00	#10	73%	
1.180	#16	72%	
0.600	#30	69%	
0.425	#40	67%	
0.300	#50	62%	
0.150	#100	49%	
0.075	#200	39.1%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Idaho Regional Manager

MATERIALS TESTING & INSPECTION

Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspections

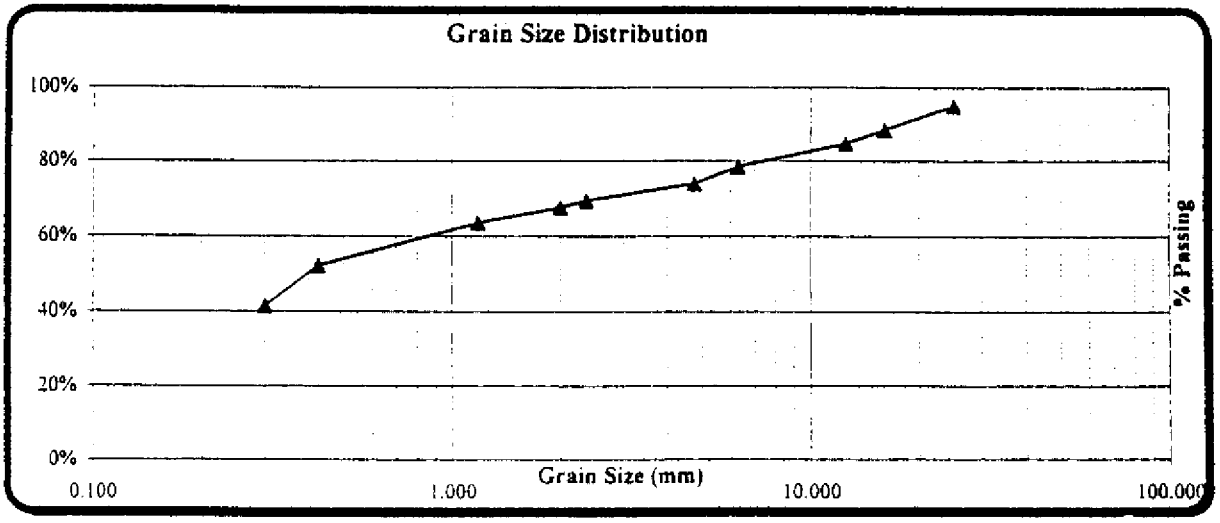
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Date Received: May 24, 1999
Sample ID: 5443
Sample Location: Type A

Percent Moisture: 8.7%
Classification: ML-CL

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
75	3"		
50	2"	100%	
37.5	1 1/2"	100%	
25	1"	98%	
19	3/4"	95%	
12.5	1/2"	89%	
9.5	3/8"	85%	
4.75	#4	79%	
2.36	#8	74%	
2.00	#10	73%	
1.180	#16	72%	
0.600	#30	70%	
0.425	#40	68%	
0.300	#50	64%	
0.150	#100	52%	
0.075	#200	41.5%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager

MATERIALS TESTING & INSPECTION

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspection

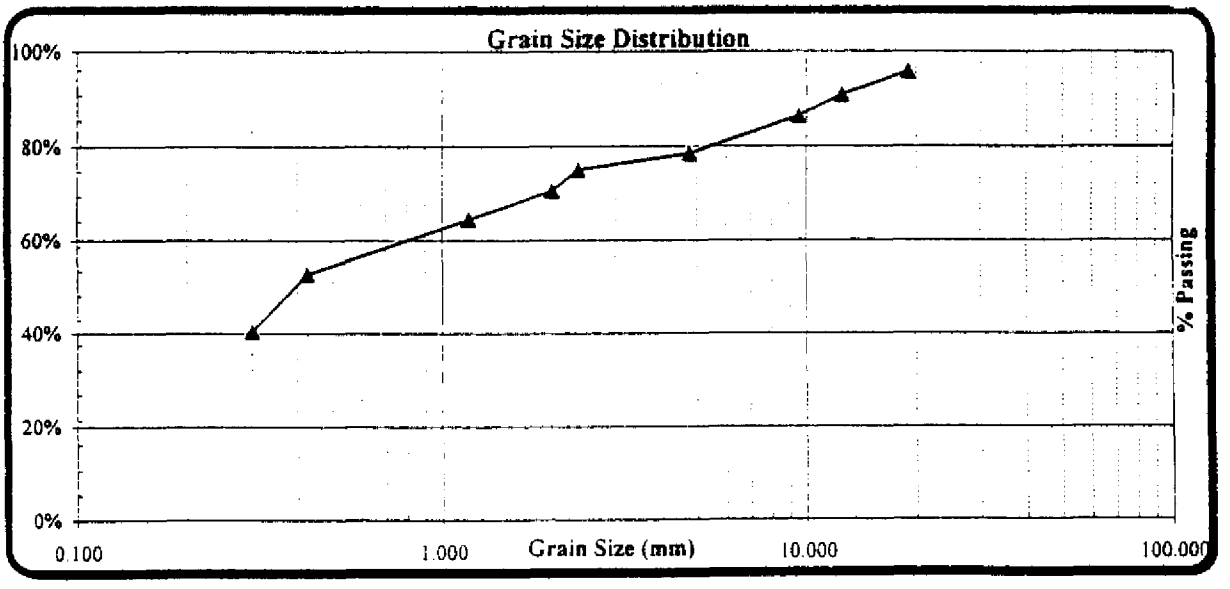
Sieve Analysis & Grain Size Distribution

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Source: Type A
Sample ID: 5444
Date Received: May 24, 1999

Percent Moisture: 7.5%
Classification: SM

Sieve Size mm	Sieve Size Inches	Percent Passing	Specifications
37.5	1 1/2"	100%	
25	1"	99%	
19	3/4"	96%	
12.5	1/2"	91%	
9.5	3/8"	86%	
4.75	#4	79%	
2.36	#8	75%	
2.00	#10	75%	
1.180	#16	73%	
0.600	#30	71%	
0.425	#40	69%	
0.300	#50	65%	
0.150	#100	53%	
0.075	#200	40.4%	



Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Southern Idaho Regional Manager
LT/klp

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 7, 199

SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST RESULTS GRADATION TYPE A SOIL
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☐ A - LEO HERBERT	☐ OTHER - PAT TAYLOR	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 14, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A			
REVIEWER:			DATE:

APPROVAL AUTHORITY DISPOSITION

ITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS DISPOSITION PROVIDED.

DISPOSITION: ☒ A ☐ B ☐ C ☐ D	COMMENTS: YES ☐ NO ☒ ATTACHED: ☐
RESPONSIBLE ENGINEER:	DATE: 6/21/99

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 7, 1999

SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST RESULTS GRADATION TYPE A SOIL
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☐ QA - LEO HERBERT	☐ OTHER - PAT TAYLOR	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

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RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE // , 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	A		
REVIEWER:	Leo Herbert		DATE: 6-8-99

APPROVAL AUTHORITY DISPOSITION

TTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL CON DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D	COMMENTS: YES ☐ NO ☐ ATTACHED: ☐
RESPONSIBLE ENGINEER:	DATE:

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 7, 199

SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST RESULTS GRADATION TYPE A SOIL
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
A - LEO HERBERT	☐ OTHER - PAT TAYLOR	☐ OTHER -

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RECORD RECOMMENDED DISPOSITION BELOW.

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RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 14, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	/		

REVIEWER: [signature] DATE: 6/9/99

APPROVAL AUTHORITY DISPOSITION

TTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D	COMMENTS: YES ☐ NO ☐ ATTACHED: ☐
RESPONSIBLE ENGINEER:	DATE:

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 7, 19

SUBMITTAL NO.: S-7304449.01-094 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST RESULTS GRADATION TYPE A SOIL
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
A - LEO HERBERT	☐ OTHER - PAT TAYLOR	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 14, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A			

REVIEWER: [illegible] DATE:

APPROVAL AUTHORITY DISPOSITION

ITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL CO[illegible]TS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D	COMMENTS: YES ☐ NO ☐ ATTACHED: ☐
RESPONSIBLE ENGINEER:	DATE:

SEE INSTRUCTIONS ON REVERSE SIDE

VENDOR DATA TRANSMITTAL AND DISPOSITION

To: PARSONS ENGINEERING SCIENCE, INC.
1700 Step: EMS 3954
ATTN: Document Control
200 S. VOORHEES AVE. P.O. BOX 1625
Idaho Falls, Idaho 83415-3954

(1) Submittal No: S-7304449.01-095 (2) Rev: 1
(3) Project: TRA REMEDIAL ACTION OU 2-13 (4) No: 7304449.01
(5) Subcontractor: PHOENIX OF IDAHO, INC.
(6) Subcontractor Code: 99-02-117
(7) Date of Submittal: 06-29-99

(A) Work may proceed subject to incorporation of any comments noted.
(B) Revise and resubmit. Work may proceed subject to incorporation of comments noted.
(C) Revise and resubmit. Work may not proceed.
(D) Review not required. Work may proceed.

ORIGINAL

(8) Line Item No	(8) Rev	(9) Spec. Ref.	(10) VDS Item No	(11) Qty Encl	(12) Descrip.	(13) Mand Apvl	(14) Or Eq Apvl	(15) Info	(16) Submittal Data Description	(17) Document No	(17) Rev	(18) Disp Status
A	1	02200 (1.3.1)	3-04	4	X	X			TEST REPORTS TYPE A SOIL 1957 CELL 06-01-99			A
B	1	02200 (1.3.1)	3-04	4	X	X			TEST REPORTS TYPE A SOIL 1957 CELL 06-02-99			A
C	1	02200 (1.3.1)	3-04	4	X	X			TEST REPORTS TYPE A SOIL 1957 CELL 06-03-99			A

B-351

(19) Remarks: LOCATOR MAPS FOR TYPE A SOIL 1957 CELL 06-01-99, 06-02-99, 06-03-99

095

(20) Subcontractor Signature: [signature] Date: 06-29-99

(21) Date Received	Date Forwarded	Qty Encl	Signature
7-1-99	7-1-99	4	AP
7-12-99	7-12-99	1	AP

(22) Comments:

(23) [X] Additional Comments Attached

Annette Poole 7/12/99
(24) Signature Date

(25) Distribution	CVR	Sats	Distribution	CVR	Sats
ES&H			CAM Craig		
OC Leo			PRO		
OC			SUB		
(1) Jody			Bill O		

(26) I acknowledge receipt of the data indicated and agree ____ disagree ____ to incorporate any comments

[signature]
Subcontractor Signature

7-19-99
Date

PARSONS

DOCUMENT REVIEW RECORD

☐ Project Document
☐ Design document
☒ Vendor Data

Project: S-730449.01 Document Number/Title:

Submittal No: #095 K.1 Reviewer: Pat Taylor Review Date: Page: 1 of

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
A B C				Locator Map is missing.	Maps Included.

Comment Resolutions Accepted By Reviewer: Craig Reese for Pat Taylor Date: 7/12/99

Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial comment that, if incorporated, would improve the document.

7-12-99

MATERIALS TESTING & INSPECTION, INC.

☐ A WORK MAY PROCEED SUBJECT TO INCORPORATION OF COMMENTS
☒ B REVISE AND RESUBMIT WORK MAY PROCEED SUBJECT TO INCORPORATION OF CHANGES INDICATED
☐ C REVISE AND RESUBMIT WORK MAY NOT PROCEED
☐ D REVIEW NOT REQUIRED WORK MAY PROCEED

CONTRACT NO. S-7304449.01-093 R.O
BY: Annette Poole
DATE: 6-23-99

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: 99005 C
DATE: 6-1-99
CLIENT: ENGEL
PERMIT:
PROJECT: ENGEL / ITRA
INSPECTOR: D. BIRD
CONTRACTOR: PHENIX
WEATHER: COOL 55° CLOUDY

% Compaction Required: 95% Soils: 5362 Asphalt: — Nuke Gauge: 417

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#1	133.3	12.3	9.2	123.0	123.6	9.4	97.8
Location:	35' N. OF SO. SIDE 50' W. OF E SIDE 4" DEPTH -4' LEVEL						
#2	130.9	11.6	8.8	119.3	123.6	9.4	96.5
Location:	30' N. OF S. SIDE 60' W. OF E. SIDE 4" DEPTH -4 LEVEL						
#3	131.2	12.3	9.3	119.9	123.6	9.4	97.0
Location:	35' N. OF S. SIDE 175' W. OF E SIDE 4" DEPTH -4' LEVEL.						
#4	130.7	10.9	8.3	119.8	123.6	9.4	97.0
Location:	35' N. OF S. SIDE 100' W. OF E. SIDE 4" DEPTH -4" LEVEL						
#5	129.6	8.9	6.8	120.7	123.6	9.4	97.6
Location:	60' N. OF S. SIDE 25' E OF W. SIDE 4" DEPTH -4' LEVEL.						
#6	131.6	9.1	6.9	120.5	123.6	9.4	97.5
Location:	50' N. OF S. SIDE 90' E. OF W. SIDE 4" DEPTH -4' LEVEL						
#7	130.6	10.6	8.1	120.0	123.6	9.4	97.0
Location:	59' N. OF S. SIDE 60' E. OF W. SIDE 4" DEPTH -4' LEVEL						
#8	129.9	10.9	8.3	120.0	123.6	9.4	97.0
Location:	70' N. OF S. SIDE 70' E. OF W. SIDE 4" DEPTH -4' LEVEL						
#9	132.7	13.6	10.2	119.1	123.6	9.4	96.
Location:	90' N. OF S. SIDE 50' W. OF E. SIDE 4" LEVEL -4' LEVEL						

230 South Cole Road • Boise, Idaho 83709
Phone: (208) 376-4748 • FAX: (208) 322-6515

Materials Testing & Inspection, Inc.

In-Place Nuclear Density Test Report

FILE#: E99005 c | PROJECT: INEEL-TRA

DATE: 6-1-99 | INSPECTOR: D. BIRD

CLIENT: INEEL | CONTRACTOR: PHENIX

PERMIT: | WEATHER: COOL 55° CLOUDY

% Compaction Required: 95% Soils: 5362 Asphalt: — Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#10	129.0	11.5	8.9	117.5	123.6	9.4	95
Location:	"SANDCONE" C. 45' N. OF S. SIDE 75' W. OF E. SIDE. 4" DEPTH -4' LEVEL						
#11	133.3	12.3	9.2	121	123.6	9.4	97.8
Location:	35' S. OF N. END 35' W. OF E. SIDE 4" DEPTH -5' LEVEL						
#12	130.1	10.1	8.7	120.0	123.6	9.4	97
Location:	45' S. OF N. END 45' W. OF E. SIDE 4" DEPTH -5' LEVEL						
#13	131.1	11.2	8.5	119.9	123.6	9.4	97
Location:	45' S. OF N. END 55' W. OF E. SIDE 4" DEPTH -4' LEVEL						
#14	130.6	12.0	9.1	118.6	123.6	9.4	95.9
Location:	50' S. OF N. END 66' W. OF E. SIDE 4" DEPTH -4' LEVEL						
#15	133.9	[illegible]	8.6	122.3	123.6	9.4	98.9
Location:	35' S. OF N. END 75' W. OF E. SIDE 4" DEPTH -4' LEVEL						
#16	129.9	11.3	8.6	118.6	123.6	9.4	95.9
Location:	35' S. OF N END 85' W. OF E. SIDE 4" DEPTH -4' LEVEL						
#17	132.6	13.9	10.7	120.7	123.6	9.4	[illegible]
Location:	25' S OF N END 100' W. OF E. SIDE 4" -4' LEVEL						
#18	138.0	12.25	8.8	125.75	123.6	9.4	100
Location:	"SANDCONE" 30' S. OF N. END 65' E. OF W. SIDE 4" DEPTH						

230 South Cole Road • Boise, Idaho 83709
Phone: (208) 376-4748 • FAX: (208) 322-6515

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E99005C | PROJECT: INEEL / TRA

DATE: 6-1-99 | INSPECTOR: D. BIRD

CLIENT: INEEL | CONTRACTOR: PHENIX

PERMIT: | WEATHER: COOL 55° CLOUDY

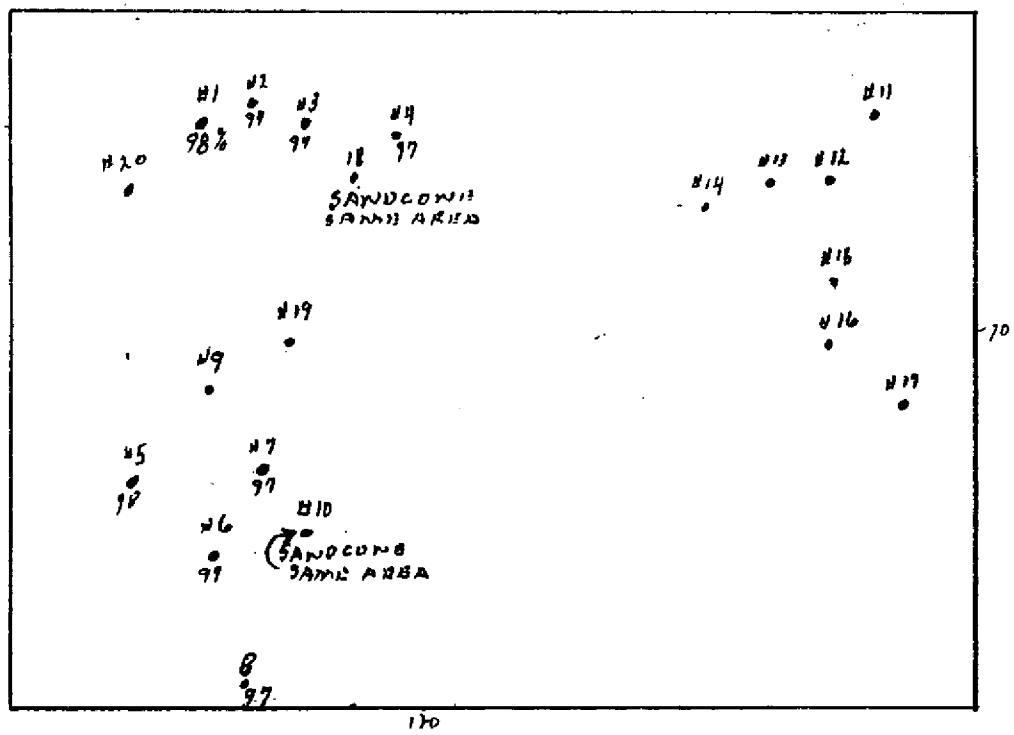
% Compaction Required: 95% | Soils: 5362 | Asphalt: 5362 | Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
19	130.1	11.1	8.5	119.0	123.6	9.4	96.2
Location:	65' E. OF W. SIDE 85' SO. OF N. END -4" DEPT + -4' LEVEL						
20	133.1	12.2	9.1	120.9	123.6	9.4	97.8
Location:	45' E. OF W. SIDE -40' SO. OF N. END -4' DEPTH - 4' LEVEL						
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							

230 South Cole Road • Boise, Idaho 83709
Phone: (208) 376-4748 • FAX: (208) 322-6515

JUNE - 1 - 99

CELL - 57



MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E 9900.5 C

PROJECT: INEEL / TRA

DATE: 6-2-99

INSPECTOR: D. BIRD

CLIENT: INEEL

CONTRACTOR: PHENIX

PERMIT:

WEATHER: COOL CLOUDY 60°

% Compaction Required: 95%

Soils: 5362

Asphalt: —

Nuke Gauge: #17

STANDARD = 34.57

MOISTURE STAND. 2791

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
1	136.6	12.50	9.1	124.1	123.6	9.4	100.
Location:	50' S. OF N. END 30' W. OF E. SIDE 4" DEPTH IN CELL 57 - 4' LEVEL.						
2	133.7	13.4	10.0	120.3	123.6	9.4	97.
Location:	50' S. OF N. END 40' W. OF E. SIDE 4" DEPTH IN CELL 57 - 4' LEVEL.						
3	130.0	11.3	8.6	118.7	123.6	9.4	96.
Location:	50' S. OF N. END 50' W. OF E SIDE 4" DEPTH CELL - 57 - 4' LEVEL						
4	135.6	14.1	10.3	121.5	123.6	9.4	98.3
Location:	50' S. OF N. END 60' W. OF E. SIDE 4" DEPTH CELL - 57 - 4' LEVEL.						
5	131.9	12.9	9.7	119.0	123.6	9.4	96.2
Location:	50' S. OF N. END 50' E. OF W. SIDE 4" DEPTH CELL - 57 - 4' LEVEL						
6	134.9	13.6	10.0	121.3	123.6	9.4	98.1
Location:	50' S. OF N. END 40' E. OF W. SIDE 4" DEPTH CELL - 57 - 4' LEVEL						
(7)	138.0	12.25	8.8	125.75	123.6	9.4	101
Location: A SANDCONE	50' S. OF N. END 30' E. OF W. SIDE 4" DEPTH CELL - 57 - 4' LEVEL						
8	138.6	10.0	7.7	118.6	123.6	9.4	95.9
Location:	50' S. OF N. END 20' E. OF W. SIDE 4" DEPTH CELL - 57 - 4' LEVEL						
9	127.1	10.1	7.9	117	123.6	9.4	94.6
Location:	50' S. OF N. END 10' E. OF W. SIDE 4" DEPTH CELL - 57 - 4' LEVEL						

230 South Cole Road • Boise, Idaho 83709
Phone: (208) 376-4748 • FAX: (208) 322-6515

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E-99005C
PROJECT: INEEL / ITRA
DATE: 6-2-99
INSPECTOR: D. BIRD
CLIENT: INEEL
CONTRACTOR: PHENIX
PERMIT:
WEATHER: CLOUDY 59° OVER CAST

% Compaction Required: 95% Soils: 5762 Asphalt: Nuke Gauge: 417

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
10	132.2	12.9	9.7	119.3	123.6	9.4	96.5
Location:	75' S OF N. SIDE 25' E. OF W. SIDE 4" DEPTH CELL-57 -4' LEVEL.						
11	130.1	11.2	8.6	118.9	123.6	9.4	96.1
Location:	75' S. OF N. SIDE 35' E. OF W. SIDE 4" DEPTH CELL-57-4' LEVEL.						
12	128.1	8.9	6.9	119.2	123.6	9.4	96.4
Location:	75' S. OF N. SIDE 45' E. OF W. SIDE 4" DEPTH CELL-57-4' LEVEL.						
13	129.0	10.2	7.9	118.8	123.6	9.4	96.1
Location:	75' S OF N. SIDE 55' E OF W. SIDE 4" DEPTH CELL-57-4' LEVEL						
14	130.0	9.6	7.3	120.4	123.6	9.4	97.4
Location:	75' S. OF N. SIDE 90' W. OF E. SIDE 4" DEPTH CELL-57-4' LEVEL.						
(15)	125.5	7.7	6.1	117.8	123.6	9.4	95.3
Location:	85' N OF S. SIDE 45' W. OF E SIDE 4" DEPTH AT CELL-57-4' LEVEL. SANDCONE						
16	133.6	13.2	9.8	120.4	123.6	9.4	97.4
Location:	100' N OF S. SIDE 35' W. OF E SIDE 4" DEPTH AT CELL-57-4' LEVEL.						
17	129.1	10.9	8.3	119.0	123.6	9.4	96.2
Location:	100' N OF S SIDE 25' W OF E SIDE 4" DEPTH AT CELL-57-4' LEVEL						
18	130.8	11.3	8.6	119.5	123.6	9.4	96.6
Location:	85' N. OF S. SIDE 75' E OF W. SIDE 4" DEPTH CELL-57 -4' LEVEL.						

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MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E99005C | PROJECT: INEEL / TRA

DATE: 6-2-99 | INSPECTOR: D. BIRD

CLIENT: INEEL | CONTRACTOR: PHENIX

PERMIT: | WEATHER: COOL 65° CLOUDY

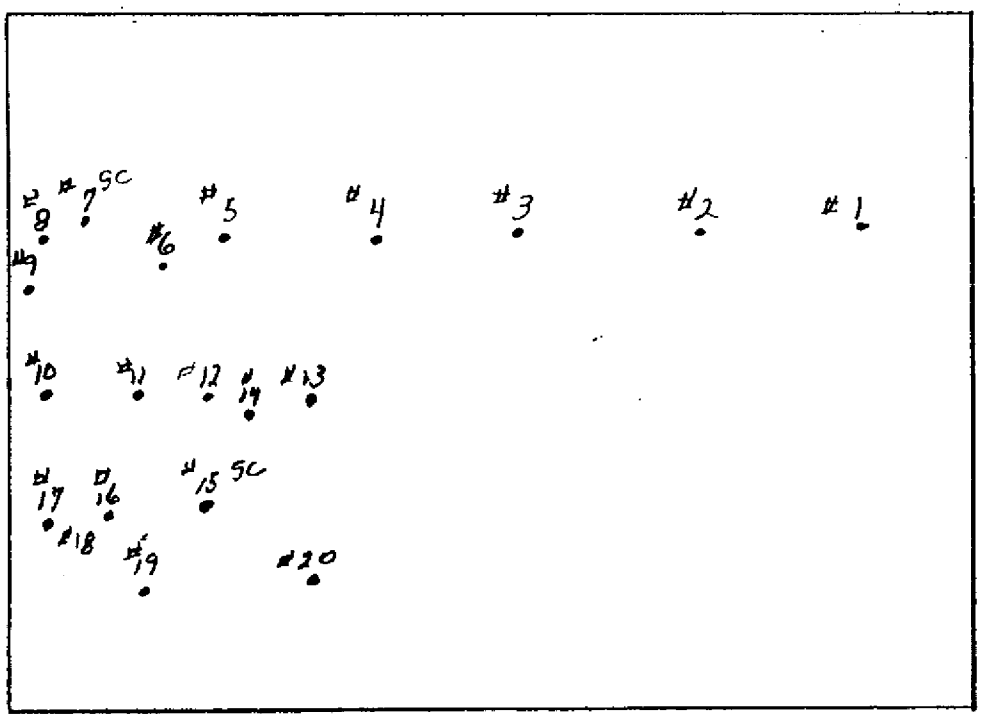
% Compaction Required: 85% | Soils: 5362 | Asphalt: - | Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum % Moisture	Percent Compaction
(19)	130.2	11.6	8.9	119.6	123.6	9.4	95.9
Location:	65' N. OF S. SIDE 45' E OF W. SIDE -4" DEPTH SANDCONE CELL-57 -3' LEVEL.						
20	132.2	13.2	9.9	120.2	123.6	9.4	96.2
Location:	50' N OF S. SIDE 56' E. OF W. SIDE -4" DEPTH CELL-57 -3' LEVEL						
(21)	125.5	7.7	6.1	117.8	123.6	9.4	95.3
Location:	50' N. OF S SIDE 25' E OF W. SIDE -4" DEPTH AT CELL-57 -3' LEVEL SANDCONE						
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							

230 South Cole Road • Boise, Idaho 83709
Phone: (208) 376-4748 • FAX: (208) 322-6515

JUNE-2-99

CELL-57



MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E99005C
PROJECT: INEEL/TRA
DATE: 6-3-99
INSPECTOR: D. BIRD
CLIENT: INEEL
CONTRACTOR: PHENIX
PERMIT:
WEATHER: COOL 52° RAINY

% Compaction Required: 95% Soils: 5&2 Asphalt: — Nuke Gauge: 17
STANDARD = 3485 MOIST. STANDARD = 2666

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
# 1	[illegible]		6.1	123.0	123.6	9.4	100
Location:	60' N. OF S. END 35' W. OF E. SIDE 4" DEPTH AT -3' BELOW GRADE CELL-57						
#2	130.2	11.9	6.0	122.3	123.6	9.4	99
Location:	60' N. OF S. END 45' W. OF E. SIDE 4" DEPTH -3' BELOW GRADE CELL-57						
#3	138.0	11.9	8.4	121.1	123.6	9.4	97.9
Location:	60' N. OF S. END 55' W. OF E. SIDE 4" DEPTH -3' GRADE CELL-57						
#4	132.0	10.3	9.3	119.7	123.6	9.4	96.8
Location:	60' N OF S. END 65' W. OF E. SIDE 4" DEPTH -3' BELOW GRADE CELL-57						
#5	131.5	10.9	8.2	120.6	123.6	9.4	97.5
Location:	60' N OF S. END 35' E. OF W. SIDE 4" DEPTH -3' BELOW GRADE CELL-57						
#6	129.5	10.3	7.9	119.2	123.6	9.4	96.4
Location:	75' N OF S. END 35' E OF W. SIDE 4" DEPTH -3' BELOW GRADE CELL-57						
#7	134.1	14.2	10.5	119.9	123.6	9.4	97.0
Location:	75' N. OF S. END 55' E. OF W. SIDE 4" DEPTH -3' BELOW GRADE CELL-57						
#8	128.9	11.0	8.5	117.9	123.6	9.4	95.3
Location:	75' N. OF S. END 35' E. OF W. SIDE 4" DEPTH -3' BELOW GRADE CELL-57						
#9	131.0	8.1	6.4	122.9	123.6	9.4	99.9
Location: A SANDZONE	75' N. OF S. END 45' E. OF W. SIDE 4" DEPTH -3' BELOW GRADE CELL-57						

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: 99005c
PROJECT: INEEL / ITA
DATE: 6-3-99
INSPECTOR: D. BIRD
CLIENT: INEEL
CONTRACTOR: PHENIX
PERMIT:
WEATHER: COOL - 55° CLOUDY

% Compaction Required: 95% Soils: 5362 Asphalt: — Nuke Gauge: #17

STANDARD = 3485 MOISTURE = 2666

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#10	128.0	11.0	8.5	117.0	123.6	9.4	94.6
Location:	40' S. OF N. END 40' E. OF W. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#11	127.3	9.3	7.3	118.0	123.6	9.4	95.4
Location:	40' S. OF N. END 50' E. OF W. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#12	130.1	10.6	8.1	119.5	123.6	9.4	96.6
Location:	40' S. OF N. END 60' E. OF W. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#13	129.0	10.0	7.7	119.0	123.6	9.4	96.2
Location:	50' S. OF N. END 35' W. OF E. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#14	130.9	11.6	8.8	119.3	123.6	9.4	96.5
Location:	50' S. OF N. END 45' W. OF E. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#15	127.6	10.0	7.8	117.6	123.6	9.4	95.1
Location:	50' S. OF N. END 55' W. OF E. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#16	132.1	11.3	8.5	120.8	123.6	9.4	97.7
Location:	50' S. OF N. END 75' W. OF E. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#17	134.3	12.9	9.6	121.4	123.6	9.4	98.2
Location:	50' S. OF N. END 85' W. OF E. SIDE 4" DEPTH -3' LEVEL AT CELL-57						
#18	133.5	10.0	7.4	123.5	123.6	9.4	100.0
Location:	45' S. OF N. END 25' W. OF E. SIDE 4" DEPTH -3 LEVEL AT CELL-57						
SAND CONE							

MATERIALS TESTING & INSPECTION, INC.

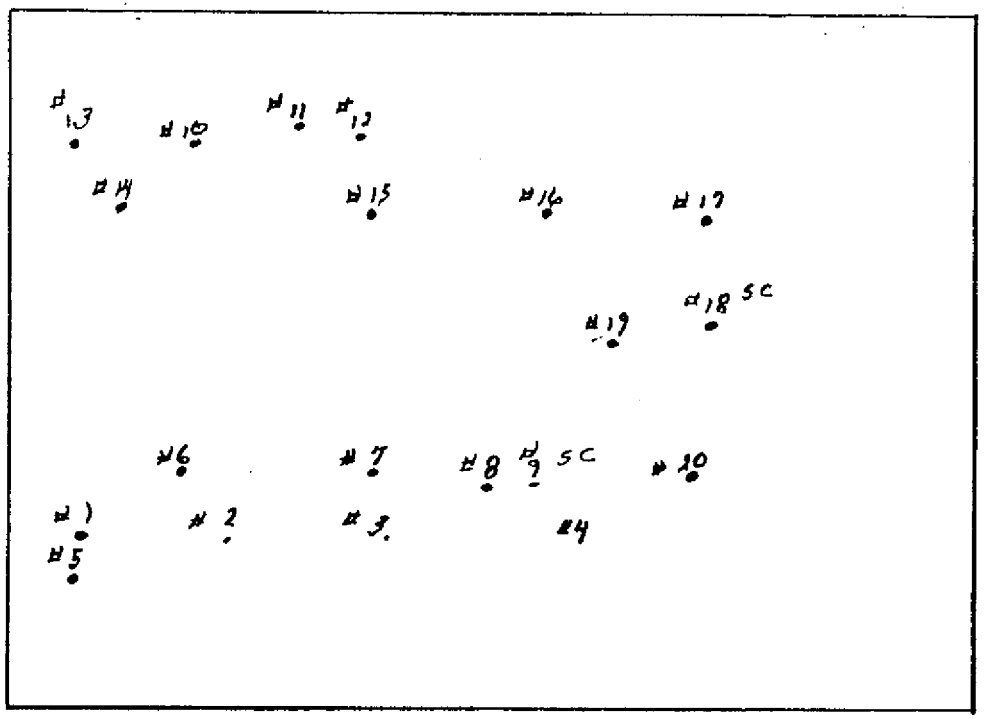
IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: 99005c
PROJECT: INEEL / TRA
DATE: 6-3-99
INSPECTOR: D. BIRD
CLIENT: INEEL
CONTRACTOR: PHENIX
PERMIT:
WEATHER: COOL 54° CLOUDY

% Compaction Required: 95% Soils: 5362 Asphalt: — Nuke Gauge: #17
STANDARD = 3485 MOISTURE COUNT = 2666

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
19	129.8	10.7	8.2	119.1	123.6	9.4	96.3
Location:	60' N. OF S. END 50' W. OF E. SIDE -4" DEPTH AT -2' LEVEL CELL-57						
20	133.3	11.9	8.9	121.4	123.6	9.4	98.2
Location:	75' N. OF S. END 55' W. OF E. SIDE -4" DEPTH AT -2' LEVEL CELL-57						
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							

JUNE 3-99
CELL-57



PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

July 1, 1999

SUBMITTAL NO.: S-7304449.01- 95 Rev. /	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST REPORTS TYPE A SOIL 1957 CELL 5/26/99
"B" TEST REPORTS TYPE A SOIL 1957 CELL 5/27/99
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
QA - LEO HERBERT	☐ OTHER - Bill C.	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JULY 9, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A			
B			
REVIEWER:			DATE:

APPROVAL AUTHORITY DISPOSITION

SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS AND DISPOSITION PROVIDED.

DISPOSITION: ☒ A ☐ B ☐ C ☐ D | COMMENTS: YES ☒ NO ☐ ATTACHED: ☒

RESPONSIBLE ENGINEER: [signature] | DATE: 7/12/99

SEE INSTRUCTIONS ON REVERSE SIDE

VENDOR DATA TRANSMITTAL AND DISPOSITION

(1) To: PARSONS ENGINEERING SCIENCE, INC.
Mail Stop MS 3954
ATTN: Document Control
700 S. VOODRUFF AVE. P.O. BOX 1625
Idaho Falls, Idaho 83415-3954

(1) Submittal No. S-7304449.01-096 (2) Rev. C
(3) Project TRA REMEDIAL ACTION OU 2-13 (4) No. 7304449.01
(5) Subcontractor PHOENIX OF IDAHO, INC.
(6) Subcontractor Code 99-02-99
(7) Date of Submittal 06-10-99

(8) [ ] may proceed subject to incorporation of any comments noted.
(9) Revise and resubmit. Work may proceed subject to incorporation of comments noted.
(10) Revise and resubmit. Work may not proceed.
(11) Review not required. Work may proceed.

ORIGINAL

(8) Line Item No.	Rev	(9) Spec. Sol.	(10) VDS Item No.	(11) Qty. Encl	(12) Resub	(13) Mand Appl	(14) Or Eq Appl	(15) Info	(16) Submittal Data Description	(17) Document No.	Rev	(18) Disp Status
A	C	02200 (1.3.1)	3-04	4		X			FINAL TEST REPORT TYPE A SOIL 1957 CELL 5-26-99			A
B	C	02200 (1.3.1)	3-04	4		X			FINAL TEST REPORT TYPE A SOIL 1957 CELL 5-27-99			A
C	C	02200 (1.3.1)	3-04	4		X			FINAL TEST REPORT TYPE A SOIL 1957 CELL 6-1-99			A
	C	02200 (1.3.1)	3-04	4		X			FINAL TEST REPORT TYPE A SOIL 1957 CELL 6-2-99			A
	C	02200 (1.3.1)	3-04	4		X			FINAL TEST REPORT TYPE A SOIL 1957 CELL 6-3-99			A

B-367

(19) Remarks:

(20) Subcontractor Signature [signature] Date 06-10-99

(21) Date Received	Date Forwarded	Qty Encl	Signature
6-14-99	6-21-99	4	AP
7-1-99	7-1-99	1	AP

(22) Comments:

(23) [ ] Additional Comments Attached Annette Poole 7/1/99
(24) Signature Date

(25) Distribution	CVR	Sets	Distribution	CVR	Sets
ESH			CAM Craig		
OC Lee			CRO		
DC			SUB		
CE Jody			Bill O.		

(26) I acknowledge receipt of the data indicated and agree _____ disagree _____ to incorporate any comments

[signature]
Subcontractor Signature

7-1-99
Date

PARSONS

96

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 21, 199

SUBMITTAL NO.: S-7304449.01-096 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" FINAL TEST REPORTS TYPE A SOIL 1957 CELL 5/26/99
"B" FINAL TEST REPORTS TYPE A SOIL 1957 CELL 5/27/99
"C" FIANL TEST REPORTS TYPE A SOIL 1957 CELL 6/1/99
"D" FINAL TEST REPORTS TYPE A SOIL 1957 CELL 6/2/99
"E" FINAL TEST REPORTS TYPE A SOIL 1957 CELL 6/3/99

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 28 , 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	A		
B	B		
C	A		
D	B		
E	B		

REVIEWER: William J. Corbett DATE: 6/28/99

APPROVAL AUTHORITY DISPOSITION

'ITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COI ISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D COMMENTS: YES ☐ NO ☐ ATTACHED: ☐

RESPONSIBLE ENGINEER: DATE:

PARSONS

DOCUMENT REVIEW RECORD

☐ Pl . Document
☐ Design document
☒ Vendor Data

Project: TRA - RD/RA Document Number/Title: Submittal S-7304449.01 - 096 Rev. 0

Submittal No: Reviewer: Review Date: Page: 1 of

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
Line "B"	—	1 of 2		Test number (5) Should Read 96% Compaction	
Line "D"	—	1 of 3		Test #(5) should read 96% Compaction	
Line "E"	—	2 of 2		Test # 12 should read 97% Compaction	
"	—	"		Test # 16 should read 98% Compaction	

Comment Resolutions Accepted By Reviewer: Date:

Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial comment that, if incorporated, would improve the document.

Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspectio

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: May 26, 1999

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' South of north end, 100' East of west side, 4" depth at chem leech pond	6.7	125.0	p5362	100%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Percent Compaction
Lab # 5470	Same as above	7.5	123.7	100%

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction
2	30' North of south end, 100' East of west side, 4" depth at the warm waste pond 57 **NOTE: This test is for Nuke Gauge accuracy only**	8.0	113.5	p5362	92%

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5471	Same as above	7.9	114.2	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
3	50' North of south end of south pit, 100' West of east side, 4" depth at -5' grade, at warm waste pond	6.6	121.4	p5362	98%	Pass

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspections

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
4	50' North of south end of south pit, 150' West of east side, 4" depth at-5' grade, at warm waste pond	8.3	120.7	p5362	97%	Pass
5	100' North of south end, 50' East of west side, 4" depth at – 5' grade, at warm waste pond	7.9	117.5	p5362	95%	Pass
6	North Pit, -5' Grade at 4" depth, 50' North of south end, 50' West of east side of warm waste pond	6.9	125.0	p5362	100%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5472	Same as above	6.9	127.4	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
7	55' South of north end, 75' West of east side, 4" depth, 5' below grade, south pit, warm waste pit	8.6	119.9	p5362	97%	Pass
8	75' South of north end, 55' East of west side, 4" depth, 5' below grade, south pit, warm waste pit	6.2	120.8	p5362	97%	Pass
9	65' South of north end, 75' West of east side, 4" depth, -5' below grade, warm waste pit	7.4	119.9	p5362	97%	Pass
10	50' South of north end, 40' West of east side, 4" depth, -5' below grade, warm waste pit	7.7	118.7	p5362	96%	Pass
11	100' South of north end, 40' West of east side, 4" depth, 5' below grade, warm waste pit	8.5	121.5	p5362	98%	Pass
12	75' North of south end, 40' West of east side, 4" depth, 5' below grade, warm waste pit	7.6	120.3	p5362	97%	Pass

13	100' North of south end, 46' West of east side, 4" depth, 5' below grade, warm waste pit	7.1	118.5	p5362	96%	Pass
14	40' South of north end, 40' West of east side, 4" depth, 5' below grade, warm waste pit	8.3	119.1	p5362	96%	Pass
15	45' North of south end, 50' East of west side, 4" depth, 5' below grade, warm waste pit	4.8	121.4	p5362	98%	Pass
16	35' East of west side, 100' North of south end, 4" depth, 5' below grade, warm waste pit	8.2	119.0	p5362	96%	Pass
17	75' East of west side, 85' North of south end, 4" depth, 5' below grade, warm waste pit	9.4	120.4	p5362	97%	Pass
18	70' North of south end, 100' West of east side, 4" depth, 5' below grade, warm waste pit	8.6	118.6	p5362	95%	Pass
19	85' South of north side, 65' West of east side, 4" depth, 5' below grade, warm waste pit	5.2	120.0	p5362	97%	Pass
20	50' East of west side, 65' North of south end, 4" depth, 5' below grade, warm waste pit	7.9	118.1	p5362	96%	Pass

Required Compaction of densities: 95% **Proctor # p5362: 123.6 pcf @ 9.4% moisture**

If you have any questions concerning this report, please call us at **(208) 529-8242.**

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager
cc: Lance Peterson
LT/klp

SAND CONE DENSITY DETERMINATION

Lab Number: 5470

Project No:	E99005c	Project:	INEEL/TRA
Date:	May 26, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix

Location: 35' south of north end, 100' east of west side.

Hole Volume Calculation:

Sand Jar ID =	A
Original Sand Weight =	11.67
Remaining Sand Weight =	4.15
Discharged Sand Weight =	7.52
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.72
Volume of Hole (ft^3) =	0.059
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Jesse
Tare =	0.80
Pan + Wet Soil =	8.65
Pan + Dry Soil =	8.10
Mass of Moisture =	0.55
Percent Moisture =	7.5
Weight of Dry Soil =	7.30
Density of Removed Soil =	123.7

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	125.0
In Place Nuclear Moisture =	6.7
Sand Cone Density =	123.7
Sand Cone Moisture =	7.5

Remarks: Correlates with in place density test no. 1.

SAND CONE DENSITY DETERMINATION

Lab Number: 5471

Project No: E99005c | Project: INEEL/TRA

Date: May 26, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 30' north of south end, 100' east of west side.

Hole Volume Calculation:

Sand Jar ID =	B
Original Sand Weight =	11.26
Remaining Sand Weight =	3.76
Discharged Sand Weight =	7.50
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.70
Volume of Hole (ft^3) =	0.059
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Brook
Tare =	0.80
Pan + Wet Soil =	8.07
Pan + Dry Soil =	7.54
Mass of Moisture =	0.53
Percent Moisture =	7.9
Weight of Dry Soil =	6.74
Density of Removed Soil =	114.2

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	113.5
In Place Nuclear Moisture =	8.0
Sand Cone Density =	114.2
Sand Cone Moisture =	7.9

Remarks: Correlates with in place density test no. 2.

Note: This test replaces test no. 5469, dated May 19, 1999.

SAND CONE DENSITY DETERMINATION

Lab Number: 5472

Project No: E99005c | Project: INEEL/TRA

Date: May 26, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: North Pit - 50' north of south end, 50' west of east side.

Hole Volume Calculation:

Sand Jar ID =	C
Original Sand Weight =	11.68
Remaining Sand Weight =	4.30
Discharged Sand Weight =	7.38
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.58
Volume of Hole (ft^3) =	0.057
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Bethany
Tare =	0.98
Pan + Wet Soil =	8.74
Pan + Dry Soil =	8.24
Mass of Moisture =	0.50
Percent Moisture =	6.9
Weight of Dry Soil =	7.26
Density of Removed Soil =	127.4

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	125.0
In Place Nuclear Moisture =	6.9
Sand Cone Density =	127.4
Sand Cone Moisture =	6.9

Remarks: Correlates with in place density test no. 6.

Note: This test replaces test no. 5417, dated May 20, 1999.

f this date, six valid sand cone tests have been reported for 67 in place density tests.

MATERIALS TESTING & INSPECTION

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Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspect

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: May 27, 1999
Note: All tests were taken at the warm waste pond at 4" depth, -4' below grade

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' West of east side, 30' South of north end	8.3	120.3	p5362	97%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5474	Same as above	8.9	119.1	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
2	35' West of east side, 75' South of north end	7.3	120.6	p5362	98%	Pass
3	50' North of south end, 35' West of east side	8.5	117.3	p5362	95%	Pass
4	35' North of south end, 55' West of east side	8.4	118.6	p5362	96%	Pass
5	50' North of south end, 60' West of east side	7.8	118.2	p5362	97%	Pass
6	30' South of north end, 60' West of east side	9.1	120.8	p5362	98%	Pass
7	60' South of north end, 30' West of east side	8.7	120.5	p5362	97%	Pass
8	65' West of east side, 50' North of south side	7.8	119.6	p5362	97%	Pass
9	50' North of south side, 60' East of west side	8.5	118.0	p5362	95%	Pass
10	35' North jof south side, 50' East of west side	8.5	117.0	p5362	95%	Pass

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Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
11	40' West of east side, 60' North of south side	7.0	118.2	p5362	96%	Pass
12	40' West of east side, 60' North of south side	7.7	119.9	p5362	97%	Pass
13	35' East of west side, 35' South of north side	8.4	119.9	p5362	97%	Pass
14	35' East of west side, 47' South of north side	8.6	118.6	p5362	96%	Pass
15	35' East of west side, 47' South of north side	6.6	118.7	p5362	96%	Pass
16	35' East of west side, 90' South of north side	7.3	119.0	p5362	96%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5473	Same as above	7.8	115.6	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
17	35' East of west side, 40' North of south side	9.2	120.9	p5362	98%	Pass
18	35' East of west side, 35' North of south side	10.3	120.2	p5362	97%	Pass
19	20' North of south side, 38' East of west side	8.6	118.6	p5362	96%	Pass
20	35' North o f south side, 35' West of east side	8.2	118.0	p5362	95%	Pass

Required Compaction of densities: 95% **Proctor # p5362: 123.6 pcf @ 9.4% moisture**

If you have any questions concerning this report, please call us at **(208) 529-8242.**

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.
Lowell Trujillo

viewed by: **Lowell Trujillo**
ern Idaho Regional Manager
Lance Peterson
LT/klp

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SAND CONE DENSITY DETERMINATION

Lab Number: 5474

Project No: E99005c | Project: INEEL/TRA

Date: May 27, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 35' west of east side, 30' south of north end.

Hole Volume Calculation:

Sand Jar ID =	B
Original Sand Weight =	11.68
Remaining Sand Weight =	4.50
Discharged Sand Weight =	7.18
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.38
Volume of Hole (ft^3) =	0.055
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Jesse
Tare =	0.80
Pan + Wet Soil =	7.93
Pan + Dry Soil =	7.35
Mass of Moisture =	0.58
Percent Moisture =	8.9
Weight of Dry Soil =	6.55
Density of Removed Soil =	119.1

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	120.3
In Place Nuclear Moisture =	8.3
Sand Cone Density =	119.1
Sand Cone Moisture =	8.9

Remarks: Correlates with in place density test no. 1.

SAND CONE DENSITY DETERMINATION

Lab Number: 5473

Project No: E99005c | Project: INEEL/TRA

Date: May 27, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 35' east of west side, 90' south of north side.

Hole Volume Calculation:

Sand Jar ID =	A
Original Sand Weight =	11.75
Remaining Sand Weight =	4.55
Discharged Sand Weight =	7.20
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.40
Volume of Hole (ft^3) =	0.055
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Brook
Tare =	0.80
Pan + Wet Soil =	7.72
Pan + Dry Soil =	7.16
Mass of Moisture =	0.56
Percent Moisture =	7.8
Weight of Dry Soil =	6.36
Density of Removed Soil =	115.6

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	119.0
In Place Nuclear Moisture =	7.3
Sand Cone Density =	115.6
Sand Cone Moisture =	7.8

Remarks: Correlates with in place density test no. 16.

MATERIALS TESTING & INSPECTION

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Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: June 1, 1999
Note: All tests were taken at Cell 57 at 4" depth, -4' level

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' North of south side, 50' West of east side	9.2	121.0	p5362	98%	Pass
2	30' North of south side, 60' West of east side	8.8	119.3	p5362	97%	Pass
3	35' North of south side, 75' West of east side	9.3	119.9	p5362	97%	Pass
4	35' North of south side, 100' West of east side	8.3	119.8	p5362	97%	Pass
5	60' North of south side, 25' East of west side	6.8	120.7	p5362	98%	Pass
6	50' North of south side, 40' East of west side	7.9	120.5	p5362	97%	Pass
7	59' North of south side, 60' East of west side	8.1	120.0	p5362	97%	Pass
8	7' North of south side, 60' East of west side	8.3	120.0	p5362	97%	Pass
9	80' North of south side, 50' West of east side	10.2	119.1	p5362	96%	Pass
10	45' North of south side, 75' West of east side	8.9	117.5	p5362	95%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5518	Same as above	9.3	121.3	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
11	45' South of north end, 35' West of east side	9.2	121.0	p5362	98%	Pass

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Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
12	45' South of north end, 35' West of east side	7.7	120.0	p5362	97%	Pass
13	45' South of north end, 45' West of east side	8.5	119.9	p5362	97%	Pass
14	50' South of north end, 66' West of east side	9.1	118.6	p5362	96%	Pass
15	35' South of north end, 75' West of east side	8.6	122.3	p5362	99%	Pass
16	35' South of north end, 85' West of east side	8.6	118.6	p5362	96%	Pass
17	25' South of north end, 100' West of east side	10.7	120.7	p5362	98%	Pass
18	30' South of north end, 65' East of west side	8.8	125.8	p5362	100%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5516	Same as above	8.6	128.0	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
19	65' East of west side, 85' South of north end	8.5	119.0	p5362	96%	Pass
20	45' East of west side, 40' South of north end	9.1	120.9	p5362	98%	Pass

Required Compaction of densities: 95% Proctor # **p5362: 123.6 pcf @ 9.4% moisture**

If you have any questions concerning this report, please call us at **(208) 529-8242.**

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager
Lance Peterson
dp

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SAND CONE DENSITY DETERMINATION

Lab Number: 5516

Project No: E99005c | Project: INEEL/TRA

Date: June 1, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 35' south of north end, 65' east of west side.

Hole Volume Calculation:

Sand Jar ID =	A
Original Sand Weight =	11.75
Remaining Sand Weight =	4.50
Discharged Sand Weight =	6.71
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	3.91
Volume of Hole (ft^3) =	0.049
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Jesse
Tare =	0.80
Pan + Wet Soil =	7.61
Pan + Dry Soil =	7.07
Mass of Moisture =	0.54
Percent Moisture =	8.6
Weight of Dry Soil =	6.27
Density of Removed Soil =	128.0

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	125.8
In Place Nuclear Moisture =	8.5
Sand Cone Density =	128.0
Sand Cone Moisture =	8.6

Remarks: Correlates with in place density test no. 18.

SAND CONE DENSITY DETERMINATION

Lab Number: 5518

Project No: E99005c | Project: INEEL/TRA

Date: June 1, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 45' north of south side, 75' west of east side.

Hole Volume Calculation:

Sand Jar ID =	C
Original Sand Weight =	11.74
Remaining Sand Weight =	5.06
Discharged Sand Weight =	6.68
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	3.88
Volume of Hole (ft^3) =	0.048
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Brook
Tare =	0.82
Pan + Wet Soil =	7.18
Pan + Dry Soil =	6.64
Mass of Moisture =	0.54
Percent Moisture =	9.3
Weight of Dry Soil =	5.82
Density of Removed Soil =	121.3

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	117.5
In Place Nuclear Moisture =	8.9
Sand Cone Density =	121.3
Sand Cone Moisture =	9.3

Remarks: Correlates with in place density test no. 10.

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Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: June 2, 1999
Note: All tests were taken at Cell 57 at 4" depth, -4' level

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	50' South of north end, 30' West of east end	9.1	124.1	p5362	100%	Pass
2	50' South of north end, 40' West of east side	10.0	120.3	p5362	97%	Pass
3	50' South of north end, 50' West of east side	8.6	118.7	p5362	96%	Pass
4	50' South of north end, 60' West of east side	10.3	121.5	p5362	98%	Pass
5	50' South of north end, 40' East of west side	9.7	119.0	p5362	98%	Pass
6	50' South of north end, 40' East of west side	10.0	121.3	p5362	98%	Pass
7	50' South of north end, 30' East of west side	8.8	125.8	p5362	101%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5519	Same as above	10.1	124.4	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
8	50' South of north end, 20' East of west side	7.7	118.6	p5362	96%	Pass

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Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
9	50' South of north end, 10'East of west side	7.9	117.0	p5362	95%	Pass
10	75' South of north end, 25' East of west side	9.7	119.3	p5362	97%	Pass
11	75' south of north side, 35' East of west side	8.6	118.9	p5362	96%	Pass
12	75' South of north side, 45' East of west side	6.9	119.2	p5362	96%	Pass
13	75' South of north side, 55' East of west side	7.9	118.8	p5362	96%	Pass
14	75' South of north side, 50' West of east side	7.3	120.4	p5362	97%	Pass
15	100' North of south side, 45' West of east side	6.1	117.8	p5362	95%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5520	Same as above	6.8	118.3	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
16	100' North of south side, 35' West of east side	9.8	120.4	p5362	97%	Pass
17	100' North of south side, 25' West of east side	8.3	119.0	p5362	96%	Pass
18	85' North of south side, 35' East of west side	8.6	119.5	p5362	97%	Pass
19	65' North of south side, 45' East of west side	8.9	118.6	p5362	96%	Pass
20	50' North of south side, 56' East of west side	9.9	119.0	p5362	96%	Pass

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Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
21	50' North of south side, 25' East of west side	6.1	117.8	p5362	95%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5521	Same as above	7.0	116.3	Yes

Required Compaction of densities: 95% Proctor # p5362: 123.6 pcf @ 9.4% moisture

If you have any questions concerning this report, please call us at **(208) 529-8242.**

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager
cc: Lance Peterson
LT/klp

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SAND CONE DENSITY DETERMINATION

Lab Number: 5519

Project No: E99005c | Project: INEEL/TRA

Date: June 2, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 50' south of north end, 30' east of west side.

Hole Volume Calculation:

Sand Jar ID =	A
Original Sand Weight =	11.89
Remaining Sand Weight =	5.12
Discharged Sand Weight =	6.77
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	3.97
Volume of Hole (ft^3) =	0.050
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Bethany
Tare =	0.98
Pan + Wet Soil =	7.83
Pan + Dry Soil =	7.20
Mass of Moisture =	0.63
Percent Moisture =	10.1
Weight of Dry Soil =	6.22
Density of Removed Soil =	124.4

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	125.8
In Place Nuclear Moisture =	8.8
Sand Cone Density =	124.4
Sand Cone Moisture =	10.1

Remarks: Correlates with in place density test no. 7.

SAND CONE DENSITY DETERMINATION

Lab Number: 5520

Project No: E99005c | Project: INEEL/TRA

Date: June 2, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 100' north of south side, 45' west of east side.

Hole Volume Calculation:

Sand Jar ID =	B
Original Sand Weight =	11.76
Remaining Sand Weight =	5.66
Discharged Sand Weight =	6.10
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	3.30
Volume of Hole (ft^3) =	0.041
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Maryln
Tare =	0.74
Pan + Wet Soil =	5.92
Pan + Dry Soil =	5.59
Mass of Moisture =	0.33
Percent Moisture =	6.8
Weight of Dry Soil =	4.85
Density of Removed Soil =	118.3

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	117.8
In Place Nuclear Moisture =	6.1
Sand Cone Density =	118.3
Sand Cone Moisture =	6.8

Remarks: Correlates with in place density test no. 15.

SAND CONE DENSITY DETERMINATION

Lab Number: 5521

Project No: E99005c | Project: INEEL/TRA

Date: June 2, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 50' north of south side, 25' east of west side.

Hole Volume Calculation:

Sand Jar ID =	C
Original Sand Weight =	11.82
Remaining Sand Weight =	5.08
Discharged Sand Weight =	6.74
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	3.94
Volume of Hole (ft^3) =	0.049
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Mae
Tare =	0.74
Pan + Wet Soil =	6.84
Pan + Dry Soil =	6.44
Mass of Moisture =	0.40
Percent Moisture =	7.0
Weight of Dry Soil =	5.70
Density of Removed Soil =	116.3

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	117.8
In Place Nuclear Moisture =	6.1
Sand Cone Density =	116.3
Sand Cone Moisture =	7.0

Remarks: Correlates with in place density test no. 21.

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Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: June 3, 1999
Note: All tests were taken at Cell 57 at 4" depth, -3' below grade

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	60' North of south end, 35' West of east side	6.1	123.0	p5362	100%	Pass
2	60' North of south end, 45' West of east side	6.0	122.3	p5362	99%	Pass
3	60' North of south end, 55' West of east side	8.9	121.1	p5362	98%	Pass
4	60' North of south end, 65' West of east side	9.3	119.7	p5362	97%	Pass
5	60' North of south end, 35' East of west side	8.2	120.6	p5362	98%	Pass
6	75' North of south end, 35' East of west side	7.9	119.2	p5362	96%	Pass
7	75' North of south end, 45' East of west side	10.5	119.9	p5362	97%	Pass
8	75' North of south end, 55' East of west side	8.5	117.9	p5362	95%	Pass
9	75' North of south end, 55' East of west side	6.1	122.9	p5362	100%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5523	Same as above	7.4	119.1	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
10	40' South of north end, 40' East of west side	8.5	117.0	p5362	95%	Pass

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail

11	40' South of north end, 50' East of west side	7.3	118.0	p5362	95%	Pass
12	40' South of north end, 50' East of west side	8.1	119.5	p5362	95% 97%	Pass
13	50' South of north end, 35' West of east side	7.7	119.0	p5362	96%	Pass
14	50' South of north end, 45' West of east side	8.8	119.3	p5362	97%	Pass
15	50' south of north end, 55' West of east side	7.8	117.6	p5362	95%	Pass
16	50' south of north end, 75' West of east side	8.5	120.8	p5362	97% 98%	Pass
17	50' South of north end, 85' West of east side	9.6	121.4	p5362	98%	Pass
18	45' South of north end, 25' West of east side	7.4	123.5	p5362	100%	-

Sandcone Test

Test Number	Location	Percent Moisture	Dr (1
Lab # 5524	Same as above	9.7	12

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
19	60' North of south end, 50' West of east side	8.2	119.1	p5362	96%	Pass
20	75' North of south end, 55' West of east side	8.9	121.4	p5362	98%	Pass

Required Compaction of densities: 95% **Proctor # p5362: 123.6 pcf @ 9.4% moisture**

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: Lowell Trujillo
stern Idaho Regional Manager
Lance Peterson
LT/klp

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402 208 529-8242 Fax 208 529-6911
E-Mail emti@srv.net www.cyberhighway.net/~mti

SAND CONE DENSITY DETERMINATION

Lab Number: 5524

Project No:	E99005c	Project:	INEEL/TRA
Date:	June 3, 1999	Inspector:	Dean Bird
Client:	Phenix	Contractor:	Phenix

Location: 45' south of north end, 25' west of east side.

Hole Volume Calculation:

Sand Jar ID =	B
Original Sand Weight =	11.70
Remaining Sand Weight =	4.19
Discharged Sand Weight =	7.51
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.71
Volume of Hole (ft^3) =	0.059
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Brook
Tare =	0.80
Pan + Wet Soil =	8.82
Pan + Dry Soil =	8.11
Mass of Moisture =	0.71
Percent Moisture =	9.7
Weight of Dry Soil =	7.31
Density of Removed Soil =	123.9

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	123.5
In Place Nuclear Moisture =	7.4
Sand Cone Density =	123.9
Sand Cone Moisture =	9.7

Remarks: Correlates with in place density test no. 18.

SAND CONE DENSITY DETERMINATION

Lab Number: 5523

Project No: E99005c | Project: INEEL/TRA

Date: June 3, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 75' north of south end, 65' east of west side.

Hole Volume Calculation:

Sand Jar ID =	A
Original Sand Weight =	11.69
Remaining Sand Weight =	4.63
Discharged Sand Weight =	7.06
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.26
Volume of Hole (ft^3) =	0.053
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Bethany
Tare =	0.98
Pan + Wet Soil =	7.76
Pan + Dry Soil =	7.29
Mass of Moisture =	0.47
Percent Moisture =	7.4
Weight of Dry Soil =	6.31
Density of Removed Soil =	119.1

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	122.9
In Place Nuclear Moisture =	6.1
Sand Cone Density =	119.1
Sand Cone Moisture =	7.4

Remarks: Correlates with in place density test no. 9.

SEE INSTRUCTIONS ON REVERSE SIDE

VENDOR DATA TRANSMITTAL AND DISPOSITION

(1) To: PARSONS ENGINEERING SCIENCE, INC.
Mail Stop: MS 3954
ATTN: Document Control
200 S. VOODOOISEE AVE. P.O. BOX 1625
Idaho Falls, Idaho 83415-3954

(2) Submittal No. S-1304449.01-097 (2) Rev. 0
(3) Project TRA_REMEDIAL_ACTION_00_2-13 (4) No. 1304449.01
(5) Subcontractor PUBLIX OF IDAHO, INC.
(6) Subcontractor Code 99-02-100
(7) Date of Submittal 06-11-99

(8) [ ] Work may proceed subject to incorporation of any comments noted.
[ ] Revise and resubmit. Work may proceed subject to incorporation of comments noted.
[ ] Revise and resubmit. Work may not proceed.
[ ] Review not required. Work may proceed.

ORIGINAL

(9) Line Item No.	(9) Rev.	(9) Spec. Ref.	(10) VDS Item No.	(11) Qty. Encl	(12) Resub	(13) Mand Appl	(14) Or Eq Appl	(15) Info	(16) Submittal Data Description	(17) Document No.	Rev.	(18) Disp Status
A	0	02200 (1.3.1)	3-04	4		X			TEST REPORTS TYPE A SOIL 1957 CELL 6-9-99			
B	0	02200 (1.3.1)	3-04	4		X			TEST REPORTS TYPE A SOIL 1957 CELL 6-10-99			

(9) Remarks:

B-395

(10) Subcontractor Signature [signature] Date 06-11-99

(12) Date Received	Date Forwarded	Qty Encl	Signature
6-14-99	6-21-99	4	AP

(22) Comments:

(23) [ ] Additional Comments Attached

(24) Signature Date

(25) Distribution

Distribution	CVR	Sets	Distribution	CVR	Sets
ES&H			CAM Craig		
DC Lee			PRO		
DC			SUB		
CE Judy			Bill O		

(26) I acknowledge receipt of the data indicated and agree ____ disagree ____ to incorporate any comments.

Subcontractor Signature Date

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 21, 199

SUBMITTAL NO.: S-7304449.01-~~086~~ 097 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST REPORTS TYPE A SOIL CELL 1957 6/9/99
"B" TEST REPORTS TYPE A SOIL CELL 1957 6/10/99
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM		
	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 28, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	B		
B	B		

REVIEWER: William J. Overholt DATE: 6/28/99

APPROVAL AUTHORITY DISPOSITION
TRANSMITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D COMMENTS: YES ☐ NO ☐ ATTACHED.

RESPONSIBLE ENGINEER: DATE:

PARSONS

DOCUMENT REVIEW RECORD

☐ Pr Document
☐ Design document
☒ Vendor Data

Project: TRA - RD/RA Document Number/Title: Submittal S-7304449.01-097 Rev. 0

Submittal No: Reviewer: Review Date: Page: 1 of

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
			Test	Location Mapping Not Included	
				Test #5 (6-10-99) percent compaction should be 96.2	

Comment Resolutions Accepted By Reviewer: Date:

Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial comment that, if incorporated, would improve the document.

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: 99005C PROJECT: INEEL ITRA

DATE: 6-9-99 INSPECTOR: D. BIRD

CLIENT: INEEL CONTRACTOR: PHOENIX

PERMIT: _____ WEATHER: WARM 55° CLEAR

% Compaction Required: 95% Soils: 5326 Asphalt: — Nuke Gauge: 21

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
1.	127.7	9.0	7.0	118.7	123.6	9.4	96.0
Location:	10' N. OF S. END 20' E. OF W. SIDE AT GRADE 4" DEPTH CELL - 57						
2.	126.7	7.0	5.5	119.7	123.6	9.4	96.8
Location:	10' N. OF S. END 30' E. OF W. SIDE 4" DEPTH AT GRADE. CELL - 57						
3.	128.0	7.9	6.1	120.1	123.6	9.4	97.1
Location:	10' N. OF S. END 40' E. OF W. SIDE 4" DEPTH A GRADE. CELL - 57						
4.	129.1	8.3	6.4	120.8	123.6	9.4	97.7
Location:	10' N. OF S. END 50' E. OF W. SIDE 4" DEPTH AT GRADE. CELL - 57						
5.	127.6	9.5	7.4	118.1	123.6	9.4	95.5
Location:	10' N. OF S. END 60' E. OF W. SIDE 4" DEPTH AT GRADE. CELL - 57						
6.	128.8	8.3	6.4	120.5	123.6	9.4	97.4
Location:	10' N. OF S. END 70' W. OF E. SIDE 4" DEPTH AT GRADE CELL - 57						
7	129.5	9.5	7.3	120.0	123.6	9.4	97.0
Location:	10' N. OF S. END 20' W. OF E. SIDE 4" DEPTH AT GRADE CELL 57						
(8.)	125.7	8.24	6.5	117.5	123.6	9.21	95
Location:	10 N. OF S. END 30 E OF W. SIDE 4" DEPTH SANDCONE AT GRADE CELL - 57						
9	130.5	9.9	7.5	120.6	123.6	9.4	97.5
Location:	10' N. OF S. END 30' W. OF E. SIDE 4" DEPTH AT GRADE CELL - 57						

230 South Cole I B-398 daho 83709
Phone: (208) 376- 08) 322-6515

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E99005C | PROJECT: INEEL / TRA

DATE: 6-9-99 | INSPECTOR: D. BIRD

CLIENT: INEEL | CONTRACTOR: PHENIX

PERMIT: | WEATHER: COOL NICE 55-°

% Compaction Required: 95% | Soils: 5326 | Asphalt: — | Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
10	133.6	13.3	9.9	120.3	123.6	9.4	97.3
Location:	100' S. OF N. END 90' E. OF W. SIDE 4" DEPTH AT GRADE CELL-57						
12.	127.5	8.6	6.7	118.9	123.6	9.4	96.1
Location:	90' S. OF N END 40' E. OF W. SIDE 4" DEPTH AT GRADE CELL-57						
13.	129.9	9.2	7.0	120.7	123.6	9.4	97.6
Location:	90' S. OF N. END 50' E. OF W. SIDE 4" DEPTH AT GRADE CELL-57						
14.	128.7	6.3	4.8	122.4	123.6	9.4	99.0
Location:	80' S. OF N. END 60' E. OF W. SIDE 4" DEPTH AT GRADE CELL-57						
15.	129.9	7.9	6.0	122.0	123.6	9.4	98.7
Location:	85' S. OF N END 60' E. OF W. SIDE 4" DEPTH -1' LEVEL CELL-57						
16.	127.6	12.7		117.5	123.6	9.4	95.0
Location:	85' S. OF N. END 55' E. OF W. SIDE 4" DEPTH -1' LEVEL CELL-57						
17.					123.6	9.4	
Location:	#17 TEST WAS NOT TAKEN TODAY						
(18)					123.6	9.4	
Location:	NO SANDCONE FOR #18 WAS TAKEN TODAY						
SANDCONE	TOTAL TEST FOR TODAY WAS 16 COMP. 1 SANDCONE						
11.	128.8	9.2	7.1	119.6	123.6	9.4	96.7
Location:	75' S. OF N. END 45' E. OF W SIDE 4" DEPTH AT GRADE CELL-57						

230 South Cole B-399 Idaho 83709
Phone: (208) 376 [illegible] FAX: (208) 322-6515

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#:	E.99005C	PROJECT:	INEEL / TRA
DATE:	6-10-99	INSPECTOR:	D. BIRD
CLIENT:	INEEL	CONTRACTOR:	PHENIX
PERMIT:		WEATHER:	WARM 60°CLEAR

% Compaction Required: 95% Soils: 5362 Asphalt: Nuke Gauge: # CAML

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#1	127.1	8.2	6.4	118.9	123.6	9.4	96.1
Location:	120' S. OF N. END 35' E. OF W. SIDE 4" DEPTH -8" BELOW GRADE CELL-57						
#2	129.0	8.6	6.6	120.4	123.6	9.4	97.4
Location:	120' S OF N END 35' E OF W. SIDE 4" DEPTH -8" GRADE CELL-57						
#3	128.5	8.9	6.9	119.6	123.6	9.4	96.7
Location:	120' S. OF N. END 50' E. OF W. SIDE 4" DEPTH -8" GRADE CELL 57						
#4	129.2	10.3	7.9	118.9	123.6	9.4	96.1
Location:	100' S. OF N. SIDE 60' E. OF W. SIDE 4" DEPTH -8" GRADE CELL-57						
#5	130.3	12.3	9.4	118.9	123.6	9.4	95.4
Location:	100' S. OF N. SIDE 70' E. OF W. SIDE 4" DEPTH -8" BELOW GRADE						
#6	127.6	8.3	6.5	119.3	123.6	9.4	96.5
Location:	100' S OF N. SIDE 80' E OF W. SIDE 4" DEPTH -8 BELOW GRADE						
#7	126.2	8.0	6.3	118.2	123.6	9.4	95.6
Location:	110' S OF N. SIDE 40' W. OF E. SIDE 4" DEPTH -8" BELOW GRADE						
#8	127.9	8.3	6.4	119.6	123.6	9.4	96.7
Location:	90' N OF S END 60' W. OF E SIDE 4" DEPTH -8" BELOW GRADE						
#9	127.8	9.25	7.2	118.5	123.6	9.4	95.9
Location: SANDCONE	100' N. OF S. END 100' W. OF E. SIDE 4" DEPTH -8" BELOW GRADE						

96.2

230 South Cole R B-400 Idaho 83709
Phone: (208) 376-4 (208) 322-6515

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E99005 C PROJECT: INEEL / TRA

DATE: 6-10-99 INSPECTOR: O. BIRD

CLIENT: INEEL CONTRACTOR: PHOENIX

PERMIT: _____ WEATHER: COOL 40's° CLEAR

% Compaction Required: 95% Soils: 5362 Asphalt: — Nuke Gauge: CELL 57

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
# 10	127.6	10.2	7.9	119.2	123.6	9.4	95.
Location:	30' S. OF N. END 35' W. OF E. SIDE 4" DEPTH -8" BELOW GRADE CELL 57						
# 11	128.1	9.3	7.2	116.8	123.6	9.4	96.1
Location:	30' S. OF N. END 45 W. OF E SIDE 4" DEPTH -8" BELOW GRADE CELL 57						
# 12	129.3	10.2	7.8	119.1	123.6	9.4	96.3
Location:	30' S. OF N. END 50' W. OF E SIDE 4" DEPTH -12" BELOW GRADE CELL -57						
# 13	125.2	6.2	4.9	119.8	123.6	9.4	96.2
Location:	30' S. OF N. END 65' W. OF E. SIDE 4" DEPTH -12" BELOW GRADE CELL-57						
# 14	130.0	10.3	7.7	119.7	123.6	9.4	96.8
Location:	30' S. OF N. END 75' W. OF E SIDE 4" DEPTH -12" BELOW GRADE CELL -57						
# 15	126.6	7.6	6.0	119.0	123.6	9.4	96.2
Location:	30' S. OF N. END 90' W. OF E. SIDE 4" DEPTH -14" BELOW GRADE CELL-57						
# 16	129.9	8.3	6.3	121.6	123.6	9.4	98.3
Location:	30' S. OF N. END 100' W. OF E. SIDE 4" DEPTH -14" BELOW GRADE CELL-57						
# 17	132.2	11.9	9.0	120.3	123.6	9.4	97.3
Location:	30' S. OF N. END 40' W. OF E. SIDE 4" DEPTH -6" BELOW GRADE CELL-57						
# 18	129.9	10.2	7.8	119.7	123.6	9.4	96.8
Location:	30' S. OF N. END 50 E. OF W. SIDE 4" DEPTH -6" BELOW GRADE CELL-57						

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E9900SC PROJECT: INEEL / TRA

DATE: 6-10-99 INSPECTOR: D. BIRD

CLIENT: INEEL CONTRACTOR: PITTSBURG

PERMIT: WEATHER: NICE CLEAR

% Compaction Required: 95% Soils: 5762 Asphalt: - Nuke Gauge: CELL #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
#19	133.5	8.40	6.2	125.1	123.6	9.4	100
Location:	16' S. OF N. END 100' E. OF W. SIDE AT 4" DEPTH SAND AT -2' BELOW GRADE CELL-57						
#20	129.9	10.9	7.6	119.0	123.6	9.4	96.2
Location:	45' S. OF N. END 100' E. OF W. SIDE AT 4" DEPTH AT -2' BELOW GRADE - CELL-57						
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							

230 South Cole Road • Boise, Idaho 83709

PARSONS

98

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 21, 1999

SUBMITTAL NO.: S-7304449.01-098 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" FINAL TEST REPORTS TYPE A SOIL CHEMICAL WASTE POND 5/18/99
"B" FINAL TEST REPORTS TYPE A SOIL CHEMICAL WASTE POND 5/19/99
"C" FIANL TEST REPORTS TYPE A SOIL CHEMICAL WASTE POND 5/20/99
"D" FINAL TEST REPORTS TYPE A SOIL CHEMICAL WASTE POND 5/24/99
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 28, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	A		
B	B		
C	B		
D	B		

REVIEWER: William J. Reshelt DATE: 6/28/99

APPROVAL AUTHORITY DISPOSITION

SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D | COMMENTS: YES ☐ NO ☐ ATTACHED: ☐

RESPONSIBLE ENGINEER: | DATE:

PARSONS

DOCUMENT REVIEW RECORD

☐ Document
☐ Design document
☒ Vendor Data

Project: TRA - RD/RA Document Number/Title: Submittal S-7304449.01 - 098 Rev. 0

Submittal No: Reviewer: Review Date: Page: 1 of

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
Line "B"		2 of 2		Test number 13 percent compaction should be 97% #5469	
"				Sandcone test – refers to Lab # 5471 which is not included	
"		1 of 2 and 2 of 2		Neither page indicates tests are for the Chem. Waste Pond. Need to include Cable somewhere	
Line "C"				Sandcone test 5417 - refers to 5472; test not included.	
Line "D"				Report for 5/24/99 Chem Waste Pond was already approved as S-7304449.01-098.	
	Note: In general each sample location description should include the name of the source pond. If all Tests on a given report are from the same source, a note somewhere on the page to that effect would suffice.				
	Also - [redacted] Chemical Waste Pond is the preferred name. If Leech is used, it should be spelled leach.				

Comment Resolutions Accepted By Reviewer: Date:

Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial comment th[illegible] incorporated, would improve the document.

B-404

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspections

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: May 18, 1999

CORRECTED REPORT

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	25' West of eastside, 25' North of southside of chem leech Pond	7.0	116.8	p5362	95%	Pass
2	105' West of eastside, 25' North of south end of chem leech pond	7.0	116.9	p5362	95%	Pass
3	25' East of westside, 25' North of south end of chem leech pond	6.5	121.2	p5362	98%	Pass
4	25' East of westside, 100' North of south end of chem leech pond	7.3	130.4	p5362	105%	Pass
5	100' East of westside, 100' North of south end of chem leech pond	6.9	126.5	p5362	102%	Pass
6	25' West of eastside, 100' North of south end of chem leech pond	7.4	125.0	p5362	101%	Pass
7	35' South of north end, 55' East of westside of chem leech pond	7.2	121.9	p5362	99%	Pass
8	35' West of eastside, 55' South of north end of chem leech pond	7.2	122.1	p5362	99%	Pass
9	20' South of north end, 100' East of westside of chem leech pond	7.5	122.0	p5362	99%	Pass

MATERIALS TESTING & INSPECTION

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Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspecti

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
10	35' West of eastside, 35' North of south end of chem leech pond	6.6	124.8	p5362	100%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5400	35' West of eastside, 35' North of south end of chem leech pond	9.1	120.5	Yes

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
11	45' East of westside, 90' South of north end of chem leech pond	7.7	120.7	p5362	98%	Pass
12	45' South of north end, 100' West of east side of chem leech pond	8.1	119.0	p5362	96%	Pass

Required Compaction: 95% Proctor # p5362: 123.6 pcf @ 9.4% moisture

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager
cc: Lance Peterson
LT/klp

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402 208 529-8242 Fax 208 529-6911
E-Mail eimti@srv.net www.cyberhighway.net/~mti

SAND CONE DENSITY DETERMINATION

Lab Number: 5400

Project No: E99005c | Project: INEEL/TRA

Date: May 18, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 35' north of south end of chem leech pond.

Hole Volume Calculation:

Sand Jar ID =	A
Original Sand Weight =	11.53
Remaining Sand Weight =	3.49
Discharged Sand Weight =	8.04
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	5.24
Volume of Hole (ft^3) =	0.065
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Brook
Tare =	0.81
Pan + Wet Soil =	9.35
Pan + Dry Soil =	8.64
Mass of Moisture =	0.71
Percent Moisture =	9.1
Weight of Dry Soil =	7.83
Density of Removed Soil =	120.5

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	124.8
In Place Nuclear Moisture =	6.6
Sand Cone Density =	120.5
Sand Cone Moisture =	9.1

Remarks: Correlates with in place density test no. 10.

MATERIALS TESTING & INSPECTION

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Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspecti

ance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: May 19, 1999

CORRECTED REPORT

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' North of south end, 35' West of west side of 6" depth	7.9	121.5	p5362	98%	Pass
2	35' North of south end , 75' East of west side of 4" depth	7.5	122.0	p5362	99%	Pass
3	35' North of south end, 40' West side of 4" depth	7.7	121.3	p5362	98%	Pass
4	100' North of south end, 35' East of west side of 4" depth	8.4	118.5	p5362	96%	Pass
5	100' North of south end, 40' North of east side of 4" depth	7.7	119.0	p5362	96%	Pass
6	40' East of west side, 40' South of north end of 4" depth	7.6	122.5	p5362	99%	Pass
7	140' East of west side, 40' South of north end of 4" depth	7.7	121.4	p5362	98%	Pass
8	40' West of east side, 40' South of north end of 4" depth	8.1	121.5	p5362	98%	Pass
9	50' South of north end, 50' East of west side of 4" depth	8.2	122.0	p5362	99%	Pass
10	55' North of south end, 150' West of east side of 4" depth	7.4	124.3	p5362	99%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5468	50' South of north end, 50' East of west side of 4" depth	9.7	115.3	Yes

MATERIALS TESTING & INSPECTION

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Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspections

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
11	55' North of south end, 50' West of east side of 4" depth	7.0	120.0	p5362	97%	Pass
12	100' North of south end, 50' West of east side of 4" depth	7.3	117.9	p5362	95%	Pass
13	80' south of north end, 50' West of east side of 4" depth	7.7	120.0	p5362	95% 97%	Pass
14	80' South of north end, 55' East of west side of 4" depth	6.2	119.0	p5362	96%	Pass
15	80' South of north end, 50' West of east side of 4" depth	7.6	122.8	p5362	99%	Pass
16	25' South of north end, 50' West of east end	6.9	119.9	p5362	97%	Pass
17	25' South of north end, 55' East of west side	7.9	119.0	p5362	96%	Pass
18	35' East of west side , 90' North of south end of chem leech pond	8.4	122.3	p5362	98%	Pass
19	90' North of south end, 45' West of east side of 4" depth	4.7	120.5	p5362	97%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5469	90' North of south end, 45' West of east side of 4" depth	7.3	102.7	No Replace with #5471

Required Compaction of densities: 95% Proctor # p5362: 123.6 pcf @ 9.4% moisture

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: Lowell Trujillo
Eastern Idaho Regional Manager
Lance Peterson
lp

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402 208 529-8242 Fax 208 529-6911
E-Mail eimti@srv.net www.cyberhighway.net/~mti

SAND CONE DENSITY DETERMINATION

Lab Number: 5468

Project No: E99005c | Project: INEEL/TRA

Date: May 19, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 50' south of north end, 50' east of west side.

Hole Volume Calculation:

Sand Jar ID =	B
Original Sand Weight =	11.28
Remaining Sand Weight =	3.88
Discharged Sand Weight =	7.40
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.60
Volume of Hole (ft^3) =	0.057
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Brook
Tare =	0.81
Pan + Wet Soil =	8.02
Pan + Dry Soil =	7.38
Mass of Moisture =	0.64
Percent Moisture =	9.7
Weight of Dry Soil =	6.57
Density of Removed Soil =	115.3

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	122.0
In Place Nuclear Moisture =	8.2
Sand Cone Density =	115.3
Sand Cone Moisture =	9.7

Remarks: Correlates with in place density test no. 9.

SAND CONE DENSITY DETERMINATION

Lab Number: 5469

Project No: E99005c | Project: INEEL/TRA

Date: May 19, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 90' north of south end, 45' west of east side.

Hole Volume Calculation:

Sand Jar ID =	C
Original Sand Weight =	11.30
Remaining Sand Weight =	3.80
Discharged Sand Weight =	7.50
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.70
Volume of Hole (ft^3) =	0.059
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Bethany
Tare =	0.98
Pan + Wet Soil =	7.48
Pan + Dry Soil =	7.04
Mass of Moisture =	0.44
Percent Moisture =	7.3
Weight of Dry Soil =	6.06
Density of Removed Soil =	102.7

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	120.5
In Place Nuclear Moisture =	4.7
Sand Cone Density =	102.7
Sand Cone Moisture =	7.3

Remarks: Correlates with in place density test no. 19.

Note: Test results invalid due to excess vibration created by machinery.

Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspecti

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: May 20, 1999

CORRECTED REPORT

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	51' North of south end, 75' East of west side, 4" depth of grade	9.0	122.8	p5362	99%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5417	51' North of south end, 75' East of west side, 4" depth of grade	8.3	112.8	No Replace with Lab # 5472

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
2	100' North of south end, 75' East of west side, 4" depth of grade	8.4	121.8	p5362	99%	Pass
3	50' South of north end, 80' East of west side, 4" depth of grade	8.8	123.2	p5362	100%	Pass
4	75' South of north end, 100' East of west side, 4" depth of grade	8.3	119.1	p5362	96%	Pass

MATERIALS TESTING & INSPECTION

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☐ Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspections

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
5	100' North of south end, 100' East of west side, 4" depth of grade	8.7	120.6	p5362	98%	Pass
6	75' North of south side, 50' West of east side, 4" depth of grade	7.4	119.3	p5362	97%	Pass

Required Compaction of densities: 95% **Proctor # p5362: 123.6 pcf @ 9.4% moisture**

If you have any questions concerning this report, please call us at (208) 529-8242.

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager
cc: Lance Peterson
LT/klp

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402 208 529-8242 Fax 208 529-6911
E-Mail eimti@srv.net www.cyberhighway.net/~mti

SAND CONE DENSITY DETERMINATION

Lab Number: 5417

Project No: E99005c | Project: INEEL/TRA

Date: May 20, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 51' north of south end, 75' east of west end.

Hole Volume Calculation:

Sand Jar ID =	B
Original Sand Weight =	11.26
Remaining Sand Weight =	3.82
Discharged Sand Weight =	7.44
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.64
Volume of Hole (ft^3) =	0.058
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Brook
Tare =	0.80
Pan + Wet Soil =	7.88
Pan + Dry Soil =	7.34
Mass of Moisture =	0.54
Percent Moisture =	8.3
Weight of Dry Soil =	6.54
Density of Removed Soil =	112.8

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	122.8
In Place Nuclear Moisture =	9.0
Sand Cone Density =	112.8
Sand Cone Moisture =	8.3

Remarks: Correlates with in place density test no. 1.

Note: Test results invalid due to excess vibration created by machinery.

MATERIALS TESTING & INSPECTION

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Environmental Services ☐ Geotechnical Engineering ☐ Construction Materials Testing ☐ Special Inspections

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA
Inspector: Dean Bird
Inspection Date: May 24, 1999

MOISTURE DENSITY TEST REPORT

As requested MTI performed on-site density testing in accordance with current applicable standards. The results obtained were as follows:

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
1	35' North of south end, 20' West of east side, 4" depth of final grade	7.3	119.1	p5362	97%	Pass

Sandcone Test

Test Number	Location	Percent Moisture	Dry Density (pcf)	Correlation within 5%
Lab # 5442	Same as above, no excavted material was lost from hole	6.5	117.9	Yess

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
2	45' North of south end, 40' West of east side, 4" depth of final grade	7.6	120.0	p5362	97%	Pass
3	100' North of south end, 90' West of east side, 4" depth of final grade	7.4	119.3	p5362	97%	Pass
4	160' North of south end, 120' West of east side, 4" depth of final grade	6.6	121.4	p5362	98%	Pass
5	140' North of south side, 90' East of west side, 4" depth of final grade	8.6	118.0	p5362	95%	Pass

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspecti

Test #	Location	Percent Moisture	Dry Density (pcf)	Proctor Number	Percent Compaction	Pass/Fail
6	35' North of south side, 90' East of west side, 4" depth of grade	7.1	120.0	p5362	97%	Pass
7	100' North of south side, 30' East of west side, 4" depth of grade	7.8	117.8	p5362	95%	Pass
8	40' South of north end, 35' West of east side, 4" depth of grade	6.3	121.1	p5362	98%	Pass
9	30' South of north end, 35' East of west side, 4" depth of grade	7.9	117.7	p5362	95%	Pass

Required Compaction of densities: 95% **Proctor # p5362: 123.6 pcf @ 9.4% moisture**

If you have any questions concerning this report, please call us at **(208) 529-8242.**

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Reviewed by: Lowell Trujillo
Eastern Idaho Regional Manager
cc: Lance Peterson
LT/klp

SAND CONE DENSITY DETERMINATION

Lab Number: 5442

Project No: E99005c | Project: INEEL/TRA

Date: May 24, 1999 | Inspector: Dean Bird

Client: Phenix | Contractor: Phenix

Location: 35' north of south end, 20' west of east side.

Hole Volume Calculation:

Sand Jar ID =	A
Original Sand Weight =	11.28
Remaining Sand Weight =	3.62
Discharged Sand Weight =	7.66
Weight of Sand in Funnel =	2.80
Weight of Sand in Hole =	4.86
Volume of Hole (ft^3) =	0.061
Unit Weight of Sand (pcf) =	80.14

Hole Density Calculation:

Pan ID =	Bethany
Tare =	0.98
Pan + Wet Soil =	8.64
Pan + Dry Soil =	8.17
Mass of Moisture =	0.47
Percent Moisture =	6.5
Weight of Dry Soil =	7.19
Density of Removed Soil =	117.9

Moisture-Density Gauge/Sand Cone Correlation:

In Place Nuclear Density =	119.1
In Place Nuclear Moisture =	7.3
Sand Cone Density =	117.9
Sand Cone Moisture =	6.5

Remarks: Correlates with in place density test no. 1.

PARSONS

99

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 21, 199

SUBMITTAL NO.: S-7304449.01-099 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TEST REPORTS TYPE A SOIL CELL 1957 6/7/99
"B" TEST REPORTS TYPE A SOIL CELL 1957 6/8/99
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 28, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A			
B			

REVIEWER: DATE:

APPROVAL AUTHORITY DISPOSITION

SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D COMMENTS: YES ☐ NO ☐ ATTACHED: ☐

RESPONSIBLE ENGINEER: DATE:

PARSONS

DOCUMENT REVIEW RECORD

☐ ct Document
☐ Design document
☒ Vendor Data

Project: TRA - RD/RA Document Number/Title: Submittal S-7304449.01 - 099 Rev. 0.

Submittal No: Reviewer: Review Date: Page: 1 of

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
				Test Location Map not included	

Comment Resolutions Accepted By Reviewer: Date:

Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial comment if incorporated, would improve the document.

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

8:53 = 6 LOADS 12:45 = 4
10:52 12:14 = 4

FILE#: 99005C PROJECT: INEEL / TRA

DATE: 6-7-99 INSPECTOR: D. BIRD

CLIENT: INEEL CONTRACTOR: PHENIX

PERMIT: _____ WEATHER: CLOUDY COLD

% Compaction Required: 95.0 Soils: 5362 Asphalt: _____ Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
1.	127.2	8.1	6.3	119.1	123.6	9.4	96.0
Location:	50' S. OF N. END 25' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA						
2.	130.0	8.9	6.8	121.1	123.6	9.4	97.9
Location:	50' S. OF N. END 35' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA						
3	126.1	7.6	6.0	118.5	123.6	9.4	95.8
Location:	50' S. OF N. END 45' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA						
4	129.0	9.6	7.4	119.4	123.6	9.4	96.6
Location:	60' S. OF N. END 45' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA						
5	127.0	8.6	6.7	118.4	123.6	9.4	95.7
Location:	50' S. OF N. END 65' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA						
6	128.50	8.25	6.4	120.25	123.6	9.4	97.2
Location:	50' S. OF N. END 65' E. OF W. SIDE 4" DEPTH SAND ZONE -2' LEVEL CELL-57 AREA						
7	128.0	8.0	6.2	120.0	123.6	9.4	97.0
Location:	65' S. OF N. END 65' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA						
8	126.6	7.3	5.8	119.3	123.6	9.4	96.5
Location:	65' S. OF N. END 50' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA						
9	129.9	10.2	7.8	119.7	123.6	9.4	96.8
Location:	40' S. OF N. END 55' E. OF W. SIDE 4" DEPTH -2' LEVEL CELL-57 AREA.						

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E97005C | PROJECT: INEEL / TRA

DATE: 6-8-99 | INSPECTOR: D. BIRD

CLIENT: INEEL | CONTRACTOR: PHENIX

PERMIT: | WEATHER: CLOUDY COOL

% Compaction Required: 95% | Soils: 5362 | Asphalt: — | Nuke Gauge: 47

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
1.	130.3	11.2	8.5	119.1	123.6	9.4	96.3
Location:	80' S. OF N. END 40' E. OF W. SIDE 4" DEPTH IN CELL-57 -2' LEVEL						
2.	128.2	9.25	7.2	118.95	123.6	9.4	96.2
Location:	80' S. OF N. END 55' E. OF W. SIDE 4" DEPTH CELL-57 -2' LEVEL						
3	129.0	9.9	7.6	119.1	123.6	9.4	96.3
Location:	80' S OF N. END 65' E. OF W. SIDE 4" DEPTH CELL-57-2' LEVEL						
4.	130.9	8.2	6.7	122.7	123.6	9.4	99.0
Location:	80' S. OF W. END 35' WEST OF E. SIDE 4" DEPTH CELL-57-2' LEVEL.						
5.	133.0	11.9	8.9	121.1	123.6	9.4	97.9
Location:	80' S. OF N. END 45 WEST OF E. SIDE 4" DEPTH CELL-57-2' LEVEL.						
6.	127.6	8.3	6.5	119.3	123.6	9.4	96.5
Location:	80' S. OF N. END 50' W. OF E. SIDE 4" DEPTH CELL-57 -2' LEVEL						
7.	129.0	9.6	7.4	119.4	123.6	9.4	96.6
Location:	60' S. OF N. END 65' WEST OF E. SIDE 4" DEPTH CELL-57 -2' LEVEL.						97.1
8.	130.3	10.2	7.8	120.1	123.6	9.4	97.1
Location:	80' S OF N. END 70' W. OF E. SIDE 4" DEPTH CELL-57 -2' LEVEL						
9.	129.75	9.25	7.1	120.5	123.6	9.4	97.4
Location:	46' S. OF N. END 50' W. OF E. SIDE 4" DEPTH CELL-57 -2' LEVEL						

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E99005C | PROJECT: ENNIS / TRA

DATE: 6-8-99 | INSPECTOR: D. BIRD

CLIENT: ENNIS | CONTRACTOR: PHENIX

PERMIT: | WEATHER: CLOUDY RAINY, WINDY

% Compaction Required: 95% | Soils: 5362 | Asphalt: — | Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
10.	130.1	12.5	9.6	117.6	123.6	9.4	95.0
Location:	40' N. OF S. END 40' W. OF E. SIDE 4" DEPTH CELL-57 -2' LEVEL.						
11.	128.9	10.0	7.7	118.9	123.6	9.4	96.1
Location:	40' N OF S. END 40' W. OF E, SIDE 4" DEPTH CELL-57 -2' LEVEL.						
12.	131.2	11.9	9.0	119.3	123.6	9.4	96.5
Location:	40' W. OF S. END 50' W. OF E. SIDE 4" DEPTH CELL-57 -2' LEVEL						
13.	130.4	9.3	7.1	121.1	123.6	9.4	97.8
Location:	40' N. OF S. END 60' W. OF E. SIDE 4" DEPTH CELL-57 -2' LEVEL						94.7
14.	129.0	12.0	9.3	119.0	123.6	9.4	94.6
Location:	50' N. OF S. END 50' E. OF W. SIDE 4" DEPTH CELL-57 -2' LEVEL						
15.	128.0	10.0	7.8	118.0	123.6	9.4	95.4
Location:	50' N. OF S. END 45' E. OF W. SIDE 4" DEPTH CELL-57 -2' LEVEL						
16.	128.9	9.9		119.0	123.6	9.4	96.2
Location:	35' N. OF S. END 35' E. OF W. SIDE 4" DEPTH CELL-57 -2' LEVEL						
17.	128.7	10.6	8.2	118.1	123.6	9.4	95.5
Location:	75' N OF S. END 45' E. OF W. SIDE 4" DEPTH CELL-57 -2' LEVEL						
18.	129.5	10.6	8.1	118.9	123.6	9.4	96.1
Location:	35' N. OF S. END 50' E. OF W. SIDE 4" DEPTH						
SAND PAD	CELL-57 -2' LEVEL						

MATERIALS TESTING & INSPECTION, INC.

IN-PLACE NUCLEAR DENSITY TEST REPORT

FILE#: E99005C PROJECT: INNEL / TRA

DATE: 6-8-99 INSPECTOR: D. BIRD

CLIENT: INNEL CONTRACTOR: PHENIX

PERMIT: _____ WEATHER: COOL CLOUDY, WINDY

% Compaction Required: 95% Soils: 5226 Asphalt: — Nuke Gauge: #17

Test Number	Wet Density	Pounds Moisture	Percent Moisture	Dry Density	Maximum Density	Optimum Moisture	Percent Compaction
19.	128.1	11.1	8.6	117.0	123.6	9.4	94.6
Location:	60' S. OF N. END 60' E OF W. SIDE 4" DEPTH CELL-57 -2' LEVEL						
20.	129.3	10.9	8.4	118.4	123.6	9.4	95.7
Location:	45' N. OF S. END 45' E. OF W. SIDE 4" DEPTH CELL-57 -2' LEVEL						
Location:							
Location:							
Location:							
Location:							
Location:							
Location:							

94.7

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 21, 199

SUBMITTAL NO.: S-7304449.01-100 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" RECORD OF INSPECTION
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 28, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	B		

REVIEWER: William J. Overholt DATE: 6/28/99

APPROVAL AUTHORITY DISPOSITION

SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D | COMMENTS: YES ☐ NO ☐ ATTACHED: ☐

RESPONSIBLE ENGINEER: | DATE:

PARSONS

DOCUMENT REVIEW RECORD

☐ Document
☐ Design document
☒ Vendor Data

Project: TRA - RD/RA Document Number/Title: Submittal S-7304449.01 -100

Submittal No: 100 Reviewer: WO Review Date: 6/28/99 Page: 1 of 1

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
Line "A"				Number of cylinder tests varies slightly from Specification.	

Comment Resolutions Accepted By Reviewer: Date:

Codes: Significant comment requires resolution acceptance from Reviewer. A suggestion to improve the document: resolution response required. E - Editorial comment that, if incorporated, would improve the document.

MATERIALS TESTING & INSPECTION

ASTM C94 CONCRETE CYLINDER COMPRESSIVE STRENGTH

C:\99 JOBS\E99005C\CONCRETE\C5306-09.DOC

Environmental Services ❑ Geotechnical Engineering ❑ Construction Materials Testing ❑ Special Inspections

Lance Peterson
Phenix Construction
P. O. Box 1626
Idaho Falls, ID 83403

Project: INEEL TRA

Contractor: Phenix Construction	**Inspector: Dean Bird**	
Supplier: High Valley Concrete	**Truck #: 2**	**Ticket #:**
Mix ID:	**# Of Yards: 1**	
LOCATION:: Pipe in west backfill pit		

MIX PROPORTIONS:		TEST PROPERTIES & CONDITIONS:	
Cement :		Weather:	Clear
Fly Ash:		Ambient Temperature:	37°F
Water:		**Concrete Temp. (ASTM C 1064):**	**61°F**
Coarse Agg. #1:		Time Batched:	7:30 am
Coarse Agg. #2:		Time Placed:	9:00 am
Fine Agg. #1:		**% Air Content (ASTM C 231 or C-173):**	6.0%
Fine Agg. #2:		**Slump (inches) (ASTM C 143) :**	3 ½"
Admix #1:		Unit Weight (ASTM C 138):	
Admix #2:		Yield (ASTM C 138):	
Admix #3:		**Water Added (gals):**	
Water/Cement Ratio:			

# of Cylinders: 4

Cylinder ID	Cylinder Diam.	Height	Corr. Factor	Cylinder Area	Test Age	Test Date	Failure Load	Compressive Strength	C-617 Cap	Fracture Type	
5306	6	12	1.00	28.27	7	May 12, 99	100,850	3570		Shear	
5307	6	12	1.00	28.27	28	Jun 2, 99	164,500	5820		Shear	PASS
5308	6	12	1.00	28.27	28	Jun 2, 99	158,990	5620		Shear	PASS
5309	6	12	1.00	28.27	28	Jun 2, 99	169,160	5980		Shear	PASS

ASTM C-617 is a sulfur cap -- neoprene pads used unless otherwise noted.

Remarks:

Respectfully submitted,
MATERIALS TESTING & INSPECTION INC.

Lowell Trujillo

Reviewed by: **Lowell Trujillo**
Eastern Idaho Regional Manager
Signed / stamped original document sent to Client and appropriate agency.
c: Lance Peterson
file/klp

1230 N. Skyline Drive, Ste. C, Idaho Falls, ID 83402 208 529-8242 Fax 208 529-6911
E-Mail eimti@srv.net www.cyberhighway.net/~mti

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 22, 199

SUBMITTAL NO.: S-7304449.01-101 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" TOPOGRAPHY PLATS FINAL CHEMICAL WASTE POND
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

IF COMMENTS ARE NOT RECEIVED OR NO CONTACT MADE WITH THE RESPONSIBLE ENGINEER BY THE REQUIRED RETURN DATE, IT WILL BE EVIDENCE THAT THE REVIEWER CONCURS WITH DOCUMENT IN REVIEW. THE ENTIRE PACKAGE MUST BE RETURNED TO THE RESPONSIBLE ENGINEER, EVEN IF NO COMMENTS ARE MADE.

RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TS8	JUNE 29, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	A		

REVIEWER: William J. Overholt DATE: 6/29/99

APPROVAL AUTHORITY DISPOSITION

ITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL CO TS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D COMMENTS: YES ☐ NO ☐ ATTACHED: ☐

RESPONSIBLE ENGINEER: DATE:

101

PARSONS

DOCUMENT REVIEW RECORD

☐ Project Document
☐ Design document
☒ Vendor Data

Project: Document Number/Title:

Submittal No: Reviewer: Review Date: Page: 1 of

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION

Comment Resolutions Accepted By Reviewer: Date:

Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial comment that, if incorporated, would improve the document.

SEE INSTRUCTIONS REVERSE SIDE

VENDOR DATA TRANSMITTAL AND DISPOSITION

(1) PARSONS ENGINEERING SCIENCE, INC.
Mail Stop: MS 3954
ATTN: Document Control
2635 S. WOODRUFF AVE. (P.O. BOX 1625)
Idaho Falls, Idaho 83415-3954

(1) Submittal No. S-7304449.01-101 (2) Rev. 0
(3) Project TRA_REMEDIAL_ACTION_OU_2-13 (4) No. 7304449.01
(5) Subcontractor PHENIX OF IDAHO, INC.
(6) Subcontractor Code 99-02-101
(7) Date of Submittal 06-14-99

(8) May proceed subject to incorporation of any comments noted
(9) Revise and resubmit. Work may proceed subject to incorporation of comments noted
(10) Revise and resubmit. Work may not proceed.
(11) Review not required. Work may proceed.

ORIGINAL

(8) Line Item No.	(8) Rev	(9) Spec. Ref.	(10) VDS Item No.	(11) Qty. Encl	(12) Resub.	(13) Mand. Appl	(14) Or Fo Appl	(15) Info	(16) Submittal Data Description	(17) Document No.	(17) Rev.	(18) Disp Status
A	0	02210 (1.3.1)(B)	4-04	8		X			TOPOGRAPHY PLATS FINAL CHEMICAL WASTE POND			

B-430

(19) Remarks:

(20) Subcontractor Signature [signature] Date 06-14-99

(21) Date Received	Date Forwarded	Qty Encl	Signature
6-17-99	6-21-99	8	AP

(22) Comments:

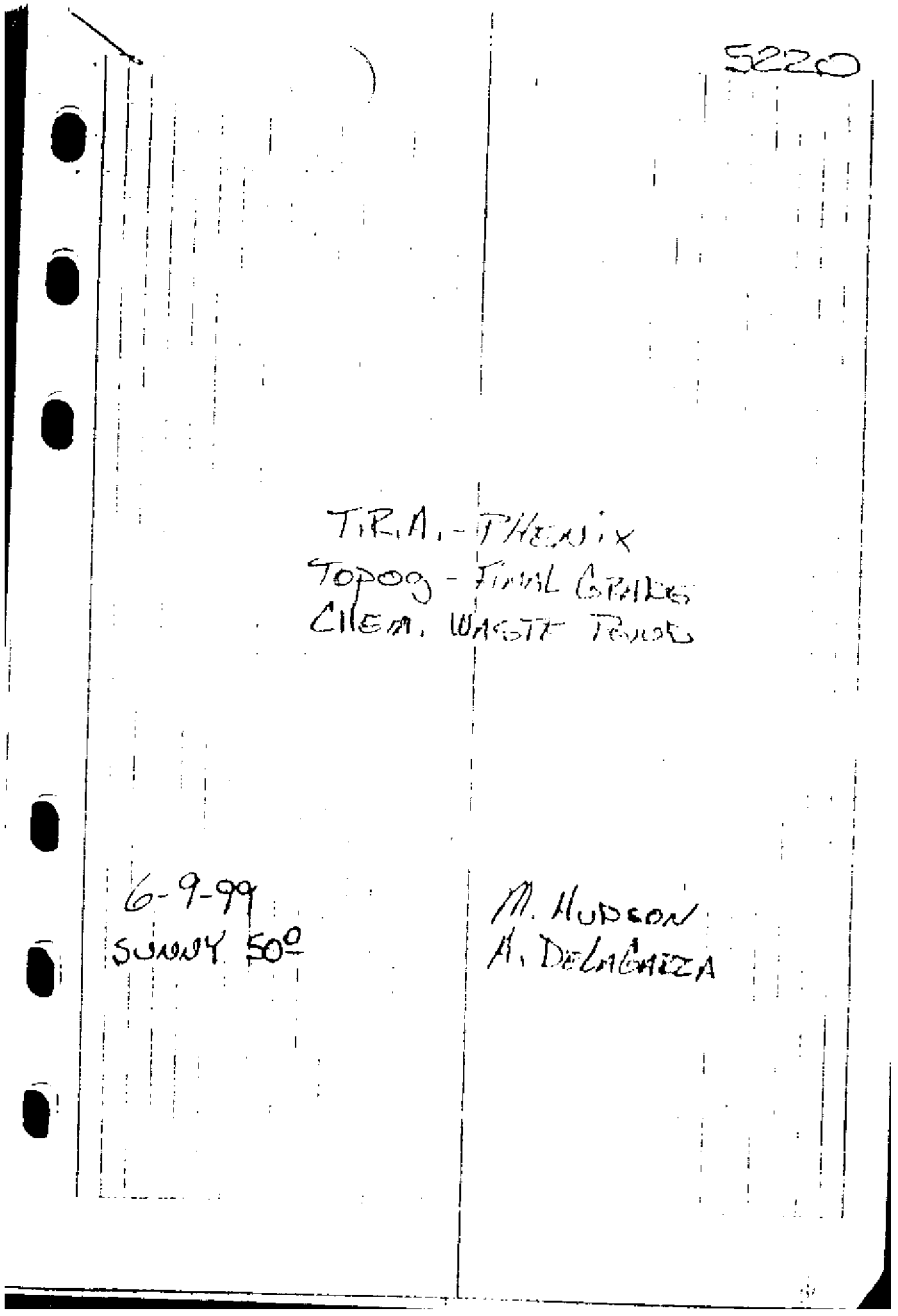
(23) [ ] Additional Comments Attached

(24) Signature Date

(25) Distribution	CVR	Sats	Distribution	CVR	Sats
ESM			CAM Craig		
DC Lee			PRO		
DC			SUB		
CE Jody			Bill C		

(26) I acknowledge receipt of the data indicated and agree ____ disagree ____ to incorporate any comments

Subcontractor Signature Date


5220
TIR.A. - PHOENIX
TOPOG - FINAL GRADES
CHEM. WASTE TRUCK
6-9-99
SUNNY 50°
M. HUDSON
A. DELAGARZA

X	Y	DIST.	ELEV.
1001 BS	00-00-00		
Toe	311-37-26	1531.81	4919.86
Top	316-44-05	181.54	21.94
Toe	22-27-20	179.49	23.87
Top	22-23-00	117.02	22.37
Toe	68-18-40	128.05	23.97
Top	64-38-31	140.53	23.06
Toe	52-37-20	151.57	23.88
Top	51-17-20	252.13	22.66
Toe	46-10-10	250.00	24.05
Top	45-26-30	363.40	22.95
Toe	28-13-41	355.81	24.05
Top	28-19-00	354.80	23.26
Toe	11-10-40	345.90	24.30
Top	11-52-50	378.00	22.86
Toe	01-25-40	368.50	24.01
Top	03-37-41	270.51	22.18
Top	14-27-50	267.30	24.06
Top	24-37-50	246.90	24.75
Top	39-16-20	182.37	24.70
Top	27-25-00	237.41	24.67
"	26-29-50	291.00	24.71
		237.60	24.97

• PoB 14
nol
B.M. Elev = 4922.04

Final Grade
C.W.P.

• PoB 11
1007

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 22, 1999

SUBMITTAL NO.: S-7304449.01-106 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" FIELD NOTES TOP TYPE B SOIL, TOP TYPE A SOIL, TOP FINAL GRADE CHEMICAL WASTE POND
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	X CE - JODY LANDIS	☐ OTHER -
LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

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RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 29, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	A		

REVIEWER: William J. Corbett DATE: 6/29/99

APPROVAL AUTHORITY DISPOSITION
AL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS POSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D COMMENTS: YES ☐ NO ☐ ATTACHED: ☐

PARSONS

DOCUMENT REVIEW RECORD

☐ ct Document
☐ Design document
☒ Vendor Data

Project: Document Number/Title:

Submittal No: Reviewer: Review Date: Page: 1 of

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION

Comment Resolutions Accepted By Reviewer: Date:

Codes: M ignificant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial commer if incorporated, would improve the document.

SEE INSTRUCTIONS ON REVERSE SIDE

VENDOR DATA TRANSMITTAL AND DISPOSITION

[1] To: PARSONS ENGINEERING SCIENCE, INC.
Mail Stop: MS 3954
ATTN: Document Control
200 S. WOODRUFF AVE. P.O. BOX 1625
Idaho Falls, Idaho 83415-3954

[1] Submittal No 5-1304449.01-106 [2] Rev 0
[3] Project TRA_REMEDIAL_ACTION_00_2-13 [4] No 1304449.01
[5] Subcontractor PHELPS DE IDAHO, INC.
[6] Subcontractor Code 99-02-102
[7] Date of Submittal 06-14-99

[ ] Work may proceed subject to incorporation of any comments noted.
[ ] Revise and resubmit. Work may proceed subject to incorporation of comments noted.
[ ] Revise and resubmit. Work may not proceed.
[X] Review not required. Work may proceed.

ORIGINAL

[8] Line Item No	[8] Rev	[9] Spec. Sct.	[10] VDS Item No.	[11] Qty. Encl	[12] Result	[13] Mand Apvl	[14] Or Eq Apvl	[15] Info	[16] Submittal Data Description	[17] Document No	Rev	[18] Disc Cat
A	0	02200 (1.3.4) 02210 (1.3.3) 4.02	4		X				FIELD NOTES TOP TYPE B SOIL TOP TYPE A SOIL, TOP FINAL GRADE CHEMICAL WASTE POND			

B-435

[19] Remarks:

[20] Subcontractor Signature [signature] Date 06-14-99

[21] Date Received	Date Forwarded	Qty Encl	Signature
6-17-99	6-21-99	4	AC

[22] Comments:

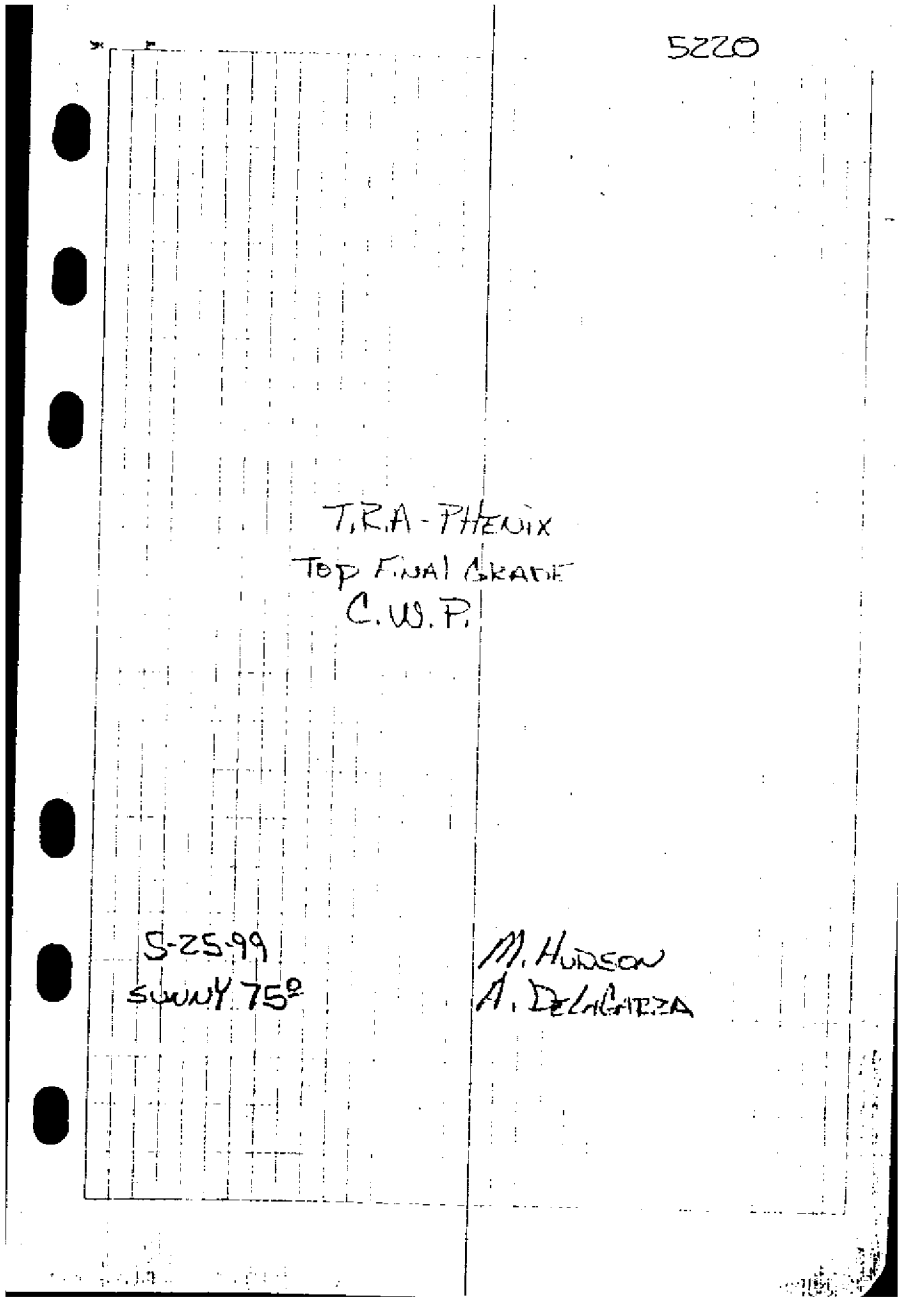
[23] [ ] Additional Comments Attached

[24] Signature Date

[25] Distribution	CVR	Sets	Distribution	CVR	Sets
ES&H			CAM Craig		
OC Leo			PRO		
DC			SUB		
CE [signature]			Bill		

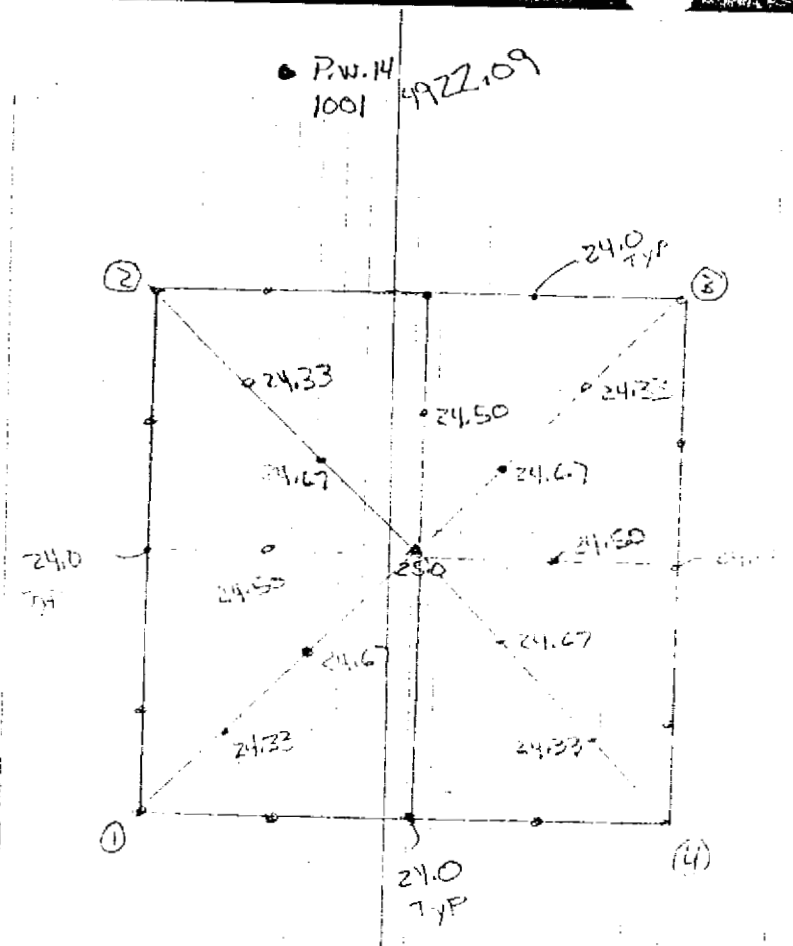
[26] I acknowledge receipt of the data indicated and agree ____ disagree ____ to incorporate my comments

Subcontractor Signature Date


5220
T.R.A - PHENIX
TOP FINAL GRADE
C.W.P.
5-25-99
SUNNY 75°
M. HUDSON
A. DELAGARZA

↑	∠
1001	00-00-00
	45-22-31
	65-06-01
	346-38-45
	11-45-12.

DIST.	B.S.
1534.80	1007
355.78	1
150.57	2
179.59	3
369.01	4



SET BLUE TOPS TO FINAL GRADE 5-25-99

P.W.11
1007

B-437

5220
PHENIX - T.P.A
TOP SOIL TYPE "A"
C. W. P.
M. HUDSON
A. DELAGARZA
5-20-99
SUNNY 70°

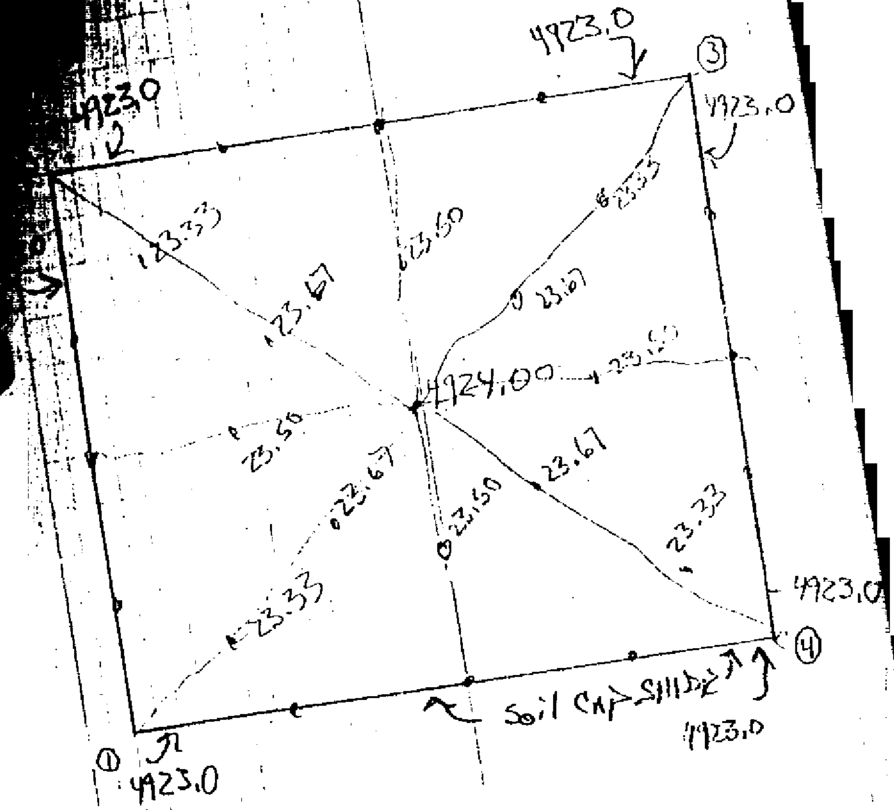
1001 P.W. 14

	00-00-00
	45-22-31
	65-06-01
	316-38-45
	11-45-12

Dist 1534.86

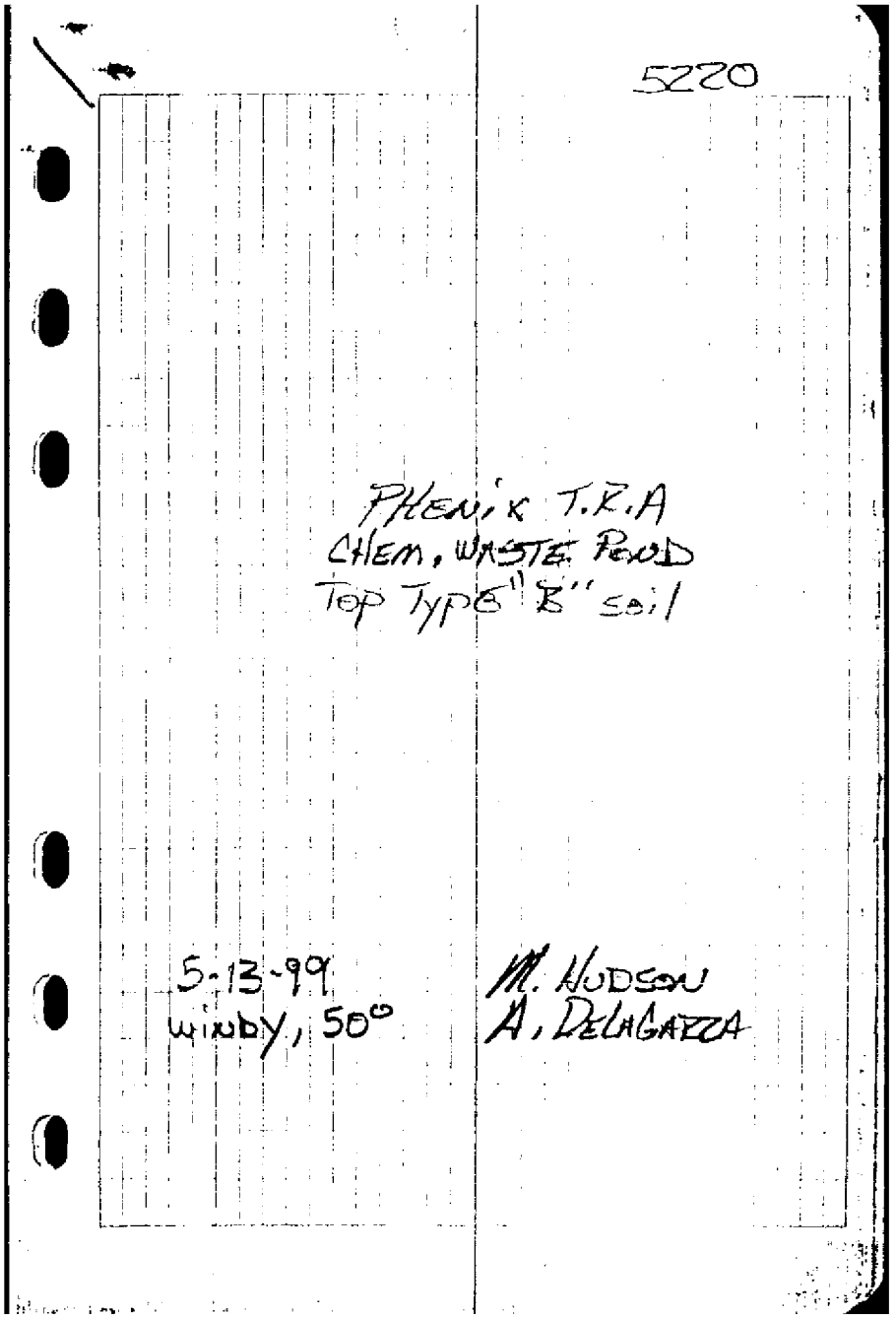
355.78	1
150.57	2
179.59	3
369.01	4

P.O. 14 • 1001



SET RED TOPS TO TOP
Soil Type "A" Elevs

1001
P.O. 11


5220
PHOENIX T.R.A
CHEM. WASTE POND
TOP TYPE "B" SOIL
5-13-99
windy, 50°
M. HUDSON
A. DELAGARZA

PARSONS

VENDOR DATA REVIEW TRANSMITTAL SHEET

June 22, 1999

SUBMITTAL NO.: S-7304449.01-107 Rev.0	PROJECT NO.: OU 2-13 TRA Remedial Action	SUBCONTRACT NO.: S-7304449.01 Phenix of Idaho

SUBMITTAL DESCRIPTION:

LINE ITEM(s): "A" FIELD NOTES ROUGH GRADE 1952 - 1957 CELLS
"B"
"C"
"D"
"E"

REVIEW AND COMMENT REQUEST FORM

	☒ ES&H -	☐ OTHER -
☒ CAM - CRAIG REESE	☒ CE - JODY LANDIS	☐ OTHER -
☒ QA - LEO HERBERT	☐ OTHER - BILL OVERHOLT	☐ OTHER -

RECORD COMMENTS ON ATTACHED REVIEW RECORD FORM.
RECORD RECOMMENDED DISPOSITION BELOW.

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RETURN COMMENTS AND SUBMITTAL PACKAGE TO THE RESPONSIBLE ENGINEER.

RESPONSIBLE ENGINEER:	AT:	BY:
Craig Reese	MS/3954 TSB	JUNE 29, 1999

REVIEW COMMENTS AND DISPOSITION

LINE NUMBER	RECOMMENDED DISPOSITION	LINE NUMBER	RECOMMENDED DISPOSITION
A	"B"		

REVIEWER: William J. Rochelt DATE: 6/29/99

APPROVAL AUTHORITY DISPOSITION

SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED, COMMENTS FROM OTHER REVIEWERS INCORPORATED OR RESOLVED, AND FINAL COMMENTS DISPOSITION PROVIDED.

DISPOSITION: ☐ A ☐ B ☐ C ☐ D COMMENTS: YES ☐ NO ☐ ATTACHED: ☐

RESPONSIBLE ENGINEER: DATE:

PARSONS

DOCUMENT REVIEW RECORD

☐ t Document
☐ Design document
☑ Vendor Data

Project: TRA - RD/RA Document Number/Title: Submittal E - 7304449.01 - 107

Submittal No: 107 Reviewer: William J. Corbett Review Date: 6/29/99 Page: 1 of 1

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	CODE	COMMENT	COMMENT RESOLUTION
				Parts of photo copy are difficult to read. Please resubmit better copy.	
				(Parts of pages have information cut off; or have dark spots that obscur the notes.)	

Comment Resolutions Accepted By Reviewer: Date:

Codes: M - Significant comment requires resolution acceptance from Reviewer. S - A suggestion to improve the document: resolution response required. E - Editorial comment - if incorporated, would improve the document.